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Divergence of Opinion and Risk: An Empirical Analysis of the *Ex Ante* Beliefs of Institutional Investors

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TABLE - 4.1

PRODUCT MOMENT CORRELATIONS (OCTOBER 1981)

	RB6*	BI3	RB7	BI4	BI5	RB8	MB4*	IA1*	MB5
	----	----	----	----	----	----	----	----	----
BI1	0.0692 80 0.2710	0.1862 67 0.0660	0.1970 92 0.0300	0.3447 152 0.0010	0.0206 86 0.4250	0.4287 63 0.0010	0.1244 86 0.1270	0.1008 164 0.0990	0.3005 100 0.0010
RB1*	0.3933 134 0.0010	0.0604 128 0.2490	-0.0006 152 0.4970	0.4053 205 0.0010	0.4910 129 0.0010	0.0294 99 0.3860	0.5540 127 0.0010	0.4706 220 0.0010	0.2327 167 0.0010
RB2	0.2315 130 0.0040	0.4231 131 0.0010	0.4095 158 0.0010	0.2732 194 0.0010	0.1912 141 0.0120	0.3254 106 0.0010	0.2320 139 0.0030	0.2263 207 0.0010	0.5364 165 0.0010
MB1	0.1947 183 0.0040	0.3148 204 0.0010	0.4174 206 0.0010	0.1633 333 0.0010	0.1070 199 0.0660	0.2783 146 0.0010	0.1258 198 0.0390	0.1091 369 0.0180	0.3145 229 0.0010
RB3*	0.5789 141 0.0010	0.2624 134 0.0010	0.0946 159 0.1180	0.3517 216 0.0010	0.1825 137 0.0160	0.0924 109 0.1700	0.5145 139 0.0010	0.6111 238 0.0010	0.1558 169 0.0220
RB4	0.1398 127 0.0580	0.4940 122 0.0010	0.4660 144 0.0010	0.3464 180 0.0010	0.1583 120 0.0420	0.5952 91 0.0010	0.1046 134 0.1140	0.1153 193 0.0550	0.5573 147 0.0010
RB5*	0.6448 74 0.0010	0.1541 58 0.1240	0.0885 85 0.2100	0.4533 96 0.0010	0.1008 68 0.2070	0.0828 59 0.2660	0.7073 80 0.0010	0.6928 103 0.0010	0.0460 81 0.3420
MB2	0.0899 172 0.1200	0.3508 187 0.0010	0.4935 212 0.0010	0.1855 310 0.0010	0.0007 199 0.4960	0.5466 142 0.0010	-0.0345 183 0.3220	-0.0216 343 0.3450	0.3642 230 0.0010
BI2*	0.4494 113 0.0010	0.0709 124 0.2170	0.0819 135 0.1730	-0.0256 202 0.3590	0.3312 136 0.0010	-0.0480 93 0.3240	0.4754 127 0.0010	0.3160 213 0.0010	0.0318 144 0.3520
MB3	0.0216 130 0.4040	0.3322 121 0.0010	0.5350 148 0.0010	0.1984 200 0.0020	-0.1047 128 0.1200	0.5712 102 0.0010	0.1198 128 0.0890	0.1720 221 0.0050	0.5062 153 0.0010

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Divergence of Opinion and Risk: An Empirical Analysis of the Ex Ante Beliefs of Institutional Investors

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Abstract

Beginning in October 1981, the Southwestern Bell Corporation (SWB) initiated the construction of an extremely interesting data base which consisted of ex ante returns for 19 major institutional investors. This research reports empirical findings on this data base. The data cover a period of almost two and one-half years. Among other things the data reveal that the level of homogeneity of institutional investors' return expectations is not high. However, their expectations are in general positively correlated. The average or consensus expectations of the analysts generally conform to the traditional risk-return trade-offs posited by the theory of financial economics. Notwithstanding, when the three risk proxies used in this study are used as independent variables in explaining levels of expected consensus returns, measures of systematic risk and divergence of opinion are positively related to expected return. The third, the standard deviation of previous market returns, is negatively related to expected returns. Finally during the early months of the study, the expectations of individual analysts generally conform to the general paradigm of risk-return pricing. In the later months of the study period, the evidence supporting a positive risk-return trade-off was less convincing.

Divergence of Opinion and Risk: An Empirical Analysis of the Ex Ante Beliefs of Institutional Investors

Rationale for the Study

The theory of financial economics posits that security prices are determined by expected returns and the risk associated with those returns. Central to the theory of many of the asset pricing models is the assumption of homogeneous beliefs among investors. Empirical evidence regarding investors' expectations, however, points to the contrary. Lease, Lewellen, and Schlarbaum (1974) indicate that investors hold distinctly different portfolios and that this is due to a host of individual perceptions and attitudes.

Sharpe (1970) points out the necessity for considering heterogeneous beliefs to justify the presence of short sales in the market. Miller (1977), Williams (1977), Rabinovitch and Owen (1978), Jarrow (1980), Figlewski (1982), and Varian (1985) have shown that heterogeneity of investors' beliefs can have an impact on stock price movements. Mayshar (1983) argues that divergent beliefs not only exist but are essential in capital markets because of their association with endogenous limitations on the number of active market participants. Thus it appears that heterogeneity of investor beliefs may provide useful insights into investors behavior toward risky financial assets.

Previous Empirical Studies

Previous empirical studies using expectational data are relatively few in number primarily due to data limitations. Malkiel and Cragg (1970) were among the first to use ex ante data from security analysts in order to investigate the structure of share prices. Their work [see also Cragg and Malkiel (1968) and (1982)] analyzed data collected during the decade of the 1960s. Friend, Westerfield, and Granito (1978) also used annual ex ante data obtained from financial institutions during the mid 1970s. Later Bart and Masse (1981) investigated Miller's (1977) proposition that uncertainty, divergence of opinion, and risk are inexorably linked, and together play a major role in determining the price of risky assets. Their study utilized survey data collected on three widely held and actively traded Canadian stocks. Peterson and Peterson (1982a) and (1982b) utilized Lynch, Jones and Ryan's Institutional Brokers Estimate System (IBES) survey data to study Miller's hypothesis linking divergence of opinion and risk. Peterson and Waldman (1984) also used IBES data to analyze the relationship between short sales and heterogeneous expectations. More recently a group of studies by Brigham, et al. (1985), Vander Weide and Carleton (1985), Harris (1986), Swidler (1985), and Timme and Eisemann (1985) have used IBES data in analyzing the role of analysts' expectations in a variety of issues.

Problems with the IBES Data

One of the major problems with the studies that have used

IBES data is that the IBES expected returns focus upon expected (typically five year) growth rates in earnings per share (EPS). This growth rate is then imbedded into a constant growth, dividend valuation model in order to obtain an expected return estimate. An interesting exception to this methodology is a paper by Dimson and Marsh (1984) in which United Kingdom security analysts, using a one year forecasting horizon, predicted the excess returns for a group of stocks. Dimson and Marsh assumed that the capital asset pricing model holds and that the market's excess return is zero. Their study among other things found on average a low correlation, .08, among institutional return forecasts, indicating a surprisingly high level of heterogeneity among the analysts.

A New Data Base

Beginning in October 1981, the Southwestern Bell Corporation (SWB) initiated the construction of an extremely interesting data base which consisted of ex ante returns for 19 major institutional investors, i.e. bank trust departments, investment bankers, brokerage houses, and an investment advisory firm. There were eight regional banks, five money center banks, five major brokerage-investment banking houses, and one investment advisory firm which originally provided input into the data base.

The total assets of the banks ranged from \$2 billion to \$100 billion, with trust income or commissions in the \$10 million

to \$1 billion range. Thus there is a reasonable representation of both "buy" side and "sell" side analysts in the data base.

Seventeen of these nineteen firms or "analysts" provided monthly updates of their return expectations for approximately two and one-half years.¹ However, during this period two of brokerage-investment banking firms stopped supplying monthly estimated returns, and thus these firm's monthly expected returns do not cover the entire period. Nevertheless the data base contains monthly expected returns on a sample of approximately 500 firms during the period October 1981 through May 1984.

As seen in Figure 1, this period is characterized by three distinct stock price patterns: two somewhat choppy downward moves

Insert Figure 1 about here

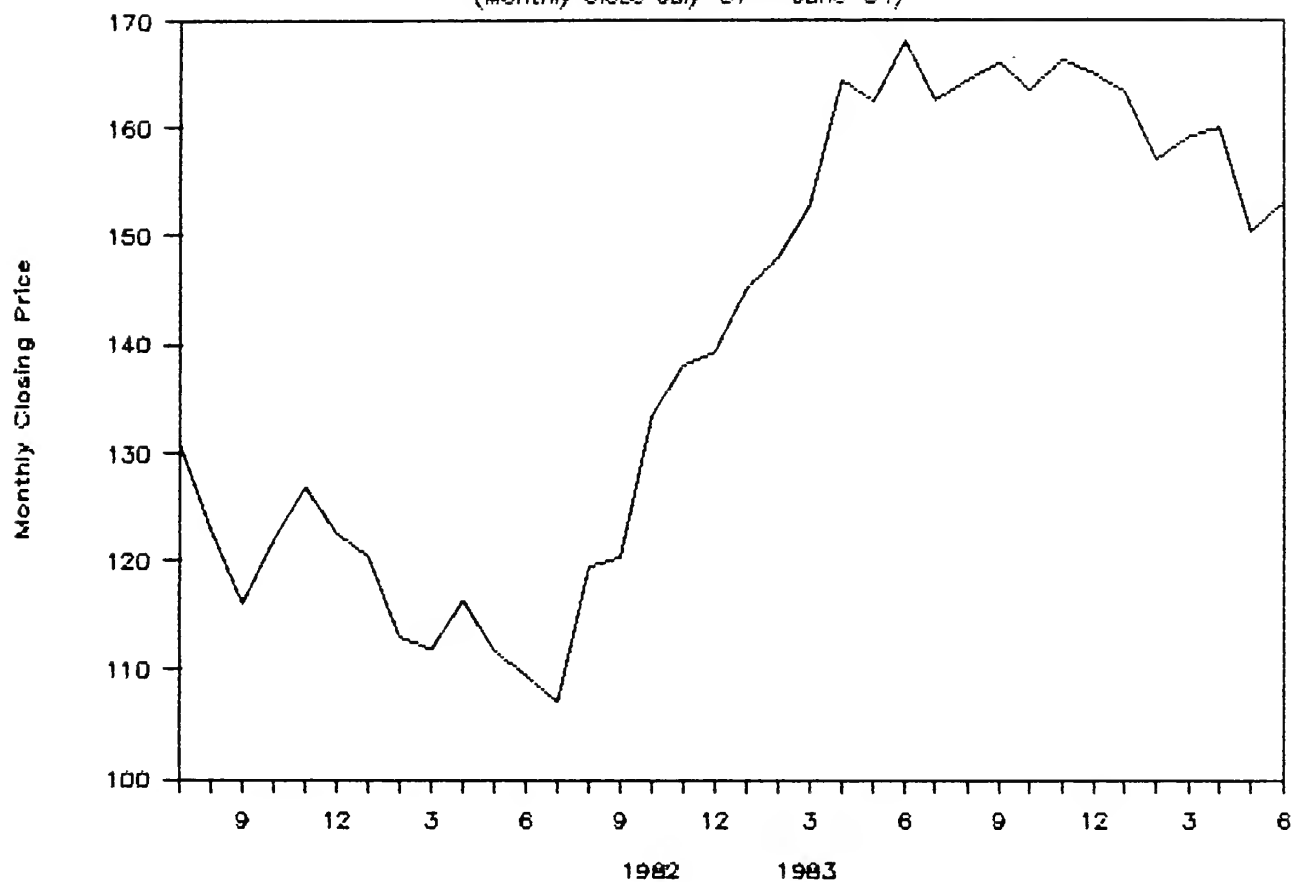
(July '81 - July 82 and May '83 - June '84) and a **major** bull market (August '82 - April '83). These distinctly different periods of market movement undoubtedly had an impact on the analysts' expectations. One of the goals of this study is to investigate these interactions.

Because of the sensitive nature of these data, the

¹ Use of the term analyst in referring to a specific institutional investor, broker-investment banker, or investment advisory firm is admittedly inaccurate. In reality most of these organizations employ literally dozens of security analysts and portfolio managers who generate the ex ante returns contained in the SWB data base.

S & P Composite Index

(Monthly Close July '81 - June '84)



institutional investors who provided the data are not identified. However, a generic classification of the type of analyst is provided, [i.e. regional bank (RBs), money center bank (MBs), brokerage house-investment banker (BIs), and/or investment advisory (IA)].

The SWB data contain expected returns derived in two ways. Like the IBES estimates, seven of the analysts provided five-year EPS growth estimates which were used to derive their expected returns using a constant growth, dividend valuation model. These analysts add their estimated constant growth rate in dividends (or earnings) per share to a forward looking annualized dividend yield in order to determine an expected return for an individual firm. Throughout the paper these constant growth analysts will be referred to as "starred" analysts.

In contrast the remaining twelve analysts used a "multi-stage" or flexible growth model to derive their expected returns. These analysts typically had two (or more) horizon periods over which they would make period specific dividend growth rate projections. The varying growth rates would in turn be used to generate a stream of future dividends. The multi-stage expected return is simply the discount rate that equates the present value of this stream of dividends with the current stock price. Throughout the paper the multi-stage analysts will be referred to as "unstarred" analysts.

Empirical Analysis: An Introduction and Overview

The structure of this research is divided into two parts.

The first analyzes the correlation structure of each analyst's expected returns for all of the possible pair-wise or jointly followed companies included in the SWB data base during October 1981, April 1982, October 1982, April 1983, and October 1983. This analysis uses product-moment and Spearman's rank order correlation techniques to measure the degree to which heterogeneity is present in the structure of the analysts' monthly expectations. Further by analyzing the correlations through time, it is possible to study the degree to which these correlations change over time.

The second phase of the study analyzes the nature of the return data for all of the companies followed by each of the nineteen (and later seventeen) analysts. This analysis is repeated for the five periods noted earlier. In addition cross-sectional regression analysis of the analysts' average expected returns are provided. Explanatory variables in this set of regressions will include a Blume (1975) sixty-month trend adjusted beta, a measure of analysts' divergence of opinion (the standard deviation of expected returns), the standard deviation of historical returns calculated over the previous sixty months, and the actual returns for each security during the previous sixty months. Finally, cross-sectional analysis examining the risk-ex ante return structure of the firms followed by each analyst is also presented.

The purpose of the second phase of the research is to ascertain the degree to which widely accepted measures of

systematic and unsystematic risk are linearly associated with the average (consensus) and/or an individual analyst's expected returns.

Given that most of the previous studies in this area have relied upon earnings expectations to proxy return expectations, the results of this study, thanks to the uniqueness of the SWB data base, provide potentially more realistic insights into ex ante risk-return relationships.

Empirical Results -- How Representative Are the Data?

Before embarking on the first phase of the empirical investigation, prudence suggested that an analysis of the extent to which the individual firms included in the SWB data base are representative of common stock returns in general be undertaken. To this end, means, standard deviations, and correlations were calculated for four indices over a 360 month period beginning in January 1952 and ending in December 1981. The four indices included value weighted and equally weighted indices of the firms in the SWB data base as well as two corresponding indices obtained from the University of Chicago's Center for Research in Security Prices (CRSP) monthly return files. Of the 505 firms in the data base, 25 were not listed on the CRSP monthly return file on December 1981. Of the 480 firms that had returns for December 1981, 209 were listed on the CRSP file on January 1952. Thus the SWB indices consisted of 209 firms initially; however, by 1981 these indices were comprised of 480 firms.

Table 1 contains the results of this analysis. The SWB

indices' average monthly returns are slightly larger than the CRSP indices, but this difference is not significantly significant at the five percent level. The correlation between the equally weighted indices is .95642, while the value weighted indices had a correlation of .99209. These results provide fairly strong support for the hypothesis that the firms included in the SWB data base are a representative sample of common stock returns contained on CRSP monthly return files.

Empirical Results -- How Heterogeneous are Analysts' Expectations?

Even though there are approximately 500 firms in the SWB data base, it is important to emphasize that not all of the firms were followed by all analysts. Instead of investigating the correlation structure of a small sub-sample of firms followed by a majority of analysts, a list of firms followed by each analyst in each month was compiled. From these lists it was possible to prepare additional lists of firms followed by any combination of analysts in any month. Pair-wise correlations (both Spearman rank order and product moment) of all possible combinations of jointly followed firms were computed for the five months noted earlier. Because of the bulkiness of these data, they are presented in Appendix A in Tables A 1 (Oct. '81), A 7 (Apr. '82), A 13 (Oct. '82), A 19 (Apr. '83), and A 25 (Oct. '83). Each of

Table 1
SWB and CRSP Indices Statistics

	<u>SWB Indices</u>		<u>CRSP Indices</u>	
	<u>Equally Weighted</u>	<u>Value Weighted</u>	<u>Equally Weighted</u>	<u>Value Weighted</u>
Arithmetic Mean	.01275	.01220	.01122	.00874
Standard Deviation	.04603	.04066	.05029	.04027
Correlations				
SWB				
Equally Weighted		.95155	.95642	.97469
Value Weighted			.86207	.99209
CRSP				
Equally Weighted				.90981

the tables is comprised of four panels. Panels a and d contain both product moment (below the diagonal) and Spearman's rank order (above the diagonal) correlations. Panels b and c contain only product moment and rank order correlations, respectively. The top and left margins of the panels identify the type of analyst providing the returns for either that column or row. The number of jointly followed firms and a level of statistical significance is provided for each correlation.

Because of the volume of the data in Appendix A, a summary of this Appendix is provided in Table 2. The data for each month are placed into four categories. To fall in the first category, a correlation must be positive and statically different from zero at the five percent level of confidence. The second category contains all positive correlations that are not statistically different from zero at the five percent level of confidence. The third category captures all correlations that are negative and are statistically different from zero at the five percent level. The final group contains all correlations that are negative but are not statistically different from zero. Table 2 contains a month by month summary of the Spearman and product moment correlations both by count and percentage.²²

Generally speaking, the percentages of the various

²² The secular decline in the number of possible "jointly followed" firms results from two analysts dropping out of the SWB data collection process. Data from broker-investment banking firm # 1 (BI1) were not available after October 1982. Similarly data from broker-investment banker firm # 5 (BI5) were not available after April 1982.

Table 2

Classification of Correlation Structures of Expected Return
Estimates Among All Combinations of Analysts*

Spearman's Rank Order Correlation

	Oct 81		Apr 82		Oct 82		Apr 83		Oct 83	
	#	%	#	%	#	%	#	%	#	%
positive and statistically significant	116	67.8	145	84.8	116	75.8	97	71.3	90	66.2
positive but not statistically significant	40	23.4	20	11.7	27	17.6	24	17.7	25	18.4
negative and statistically significant	1	.6	3	1.75	1	.7	0	0	7	5.1
negative but not statistically significant	14	8.2	3	1.75	9	5.9	15	11.0	14	10.3
Total	171	100%	171	100%	153	100%	136	100%	136	100%

Product Moment Correlations

	Oct 81		Apr 82		Oct 82		Apr 83		Oct 83	
	#	%	#	%	#	%	#	%	#	%
positive and statistically significant	118	69.0	141	82.4	121	79.1	88	64.7	93	68.4
positive but not statistically significant	38	22.2	22	12.9	20	13.1	37	27.2	30	22.1
negative and statistically significant	0	0	2	1.2	1	.6	0	0	7	5.1
negative but not statistically significant	15	8.8	6	3.5	11	7.2	11	8.1	6	4.4
Total	171	100%	171	100%	153	100%	136	100%	136	100%

*The critical level of statistical significance is 5 percent.

categories are fairly stable through time. Also the degree of homogeneity of beliefs is not high, although quite clearly the majority (approximately two-thirds) of the correlations are positive and statistically different from zero. A perusal of the Tables in Appendix A shows that only a small proportion of the correlations are greater than .50. On the other hand, only a small number of the correlations are negative, and of that number, less than one percent (on average) of the total correlations are negative and statistically significant. Thus the data suggest that roughly two-thirds of the analysts agree to a moderate degree on the relative rankings of expected returns for the firms that they "jointly follow." Because the remaining correlation categories are either not statistically different from zero or are negative in a statistical sense, one must conclude that these analysts' beliefs are quite heterogeneous.

Empirical Analysis--How Well Are "Consensus" Expectations Explained by Traditional Risk Measures?

As noted earlier, the second phase of the study cross sectionally analyzes the expected returns of the nineteen and later seventeen analysts' expected returns. The analysis is repeated for the same five months analyzed earlier. Explanatory-risk proxy variables³ were a Blume (1975) sixty-month trend

³ In addition to the variables noted here, other risk proxies or similar proxies measured over different time horizons were also investigated. For example comparable estimates for a thirty month Blume adjusted beta as well as sixty month and thirty month Vasicek (1973) Bayesian betas were estimated. In addition, historical return standard deviations for the preceding thirty months were estimated. A detailed investigation of these

adjusted beta, a measure of analysts' divergence of opinion (the standard deviation of the expected return for a given stock), and the standard deviation of the historical returns for a given security calculated over the sixty months immediately preceding the month of the expectation. The return data used in the calculations of the trend adjusted betas and other risk proxies were obtained from the CRSP monthly return files. The beta calculations, like the standard deviation of historical returns, were estimated over the sixty months immediately preceding the month of the expectation.

The first phase of the risk-return analysis focuses on the consensus or average ex ante returns. This phase of the study also investigates the extent to which starred (or constant growth) analysts differ from the unstarred (or multi-phase growth analysts). The results of the regressions undertaken in this phase are given in Appendix B. In this Appendix Tables B1(a), B1(b), and B1(c) summarize the October 1981 expectations' regression results for all analysts, only starred analysts, and only unstarred analysts, respectively. Similarly corresponding regressions by analyst type are given in Tables B7, B13, B19, and B25, for April '82, October '82, April '83, and October '83, respectively. The variables used to explain the average expectations were:

alternative measures indicated that the corresponding risk proxies were remarkably similar. In general the risk proxy estimates reported in the body of the paper had the highest level of explanatory power vis-a-vis their alternatives.

Beta	-	a sixty month, trend adjusted, "Blume" beta
DIVOP	-	the standard deviation of the analysts' expected returns
CRRET1	-	the arithmetic average of historical monthly returns during the preceding sixty months
CRSTD1	-	the standard deviation of historical returns during the preceding sixty months
CRR1A	-	the annualized equivalent of CRRET1
CRR1G	-	the geometric average monthly return during the preceding sixty months

An examination of the Tables in Appendix B reveals a large difference in the number of individual firms included in the cross sectional analysis. These differences are directly attributable to the estimation property requirements of the divergence of opinion risk proxy variable, i.e. the standard deviation of expected return. For a firm to be included in the "consensus" analysis, it must (1) be listed on CRSP monthly return tape and (2) be followed by at least five of the analysts (within a given analyst classification) in the SWB data base. The decision to estimate a standard deviation of expected return based upon a minimum of five observations is from a statistical viewpoint clearly less than optimal. However, a trade-off was clearly necessary if an analysis of this divergence of opinion risk proxy was to be undertaken. Thus in any given month, the "all analyst" category would contain all of the firms in the starred and unstarred regressions for that month.

Because of the vast number of regression runs undertaken, it is not possible to discuss the details of the results due to

space limitations. However, Table 3, Table 4, and Table 5 summarize the risk-return regression results on a month by month basis for the all, starred, and unstarred analyst categories, respectively. With the exception of April 1983, there is overwhelmingly positive and statistically significant risk-return relationship between the individual risk proxies and consensus expectations. This relationship is present in all analyst categories.

When one compares the cross-sectional relationships between consensus expected returns and more than one risk proxy, several interesting relationships emerge. With the exception of April 1983, there are statistically positive relationships between expected return, beta, and divergence of opinion for all analyst categories. However, the regressions which analyze expected returns as a function of beta and standard deviations of historical returns as well as expected returns as a function of beta, standard deviation of returns, and divergence of opinion reveal some surprising results. Specifically when one "controls" for systematic risk and/or divergence of opinion, there is often a negative and statistically significant relationship between expected return and the standard deviation of recent rates of return. These trends are most prominent for the all analyst category.

An overview of the results contained in Appendix B reveal two additional key insights. First the level of explanatory power of all of the risk return relationship tests is low. Specifically

Table 3

Summary of Positive and Statistically Significant
Risk-Consensus Expected Return Relationships
(All Analysts)

Risk Proxy Independent Variable(s)	Month/Year				
	Oct 81	Apr 82	Oct 82	Apr 83	Oct 83
Beta	yes	yes	yes	yes	yes
DIVOP	yes	yes	yes	yes	yes
CRSTD	yes	yes	yes	no	yes
Beta DIVOP	yes yes	yes yes	yes yes	no yes	yes yes
Beta CRSTD	yes *	yes **	yes **	yes **	yes *
Beta DIVOP CRSTD	yes yes **	yes yes **	yes yes **	yes yes **	yes yes **

*Negative but not statistically significant.

**Negative and statistically significant at the 5% level.

Table 4

Summary of Positive and Statistically Significant
Risk-Consensus Expected Return Relationships
(Starred or Constant Growth Analysts)

Risk Proxy Independent Variable(s)	Month/Year				
	Oct 81	Apr 82	Oct 82	Apr 83	Oct 83
Beta	yes	yes	yes	yes	yes
DIVOP	yes	yes	yes	yes	yes
CRSTD	yes	yes	yes	yes	yes
Beta	yes	yes	yes	yes	yes
DIVOP	yes	yes	yes	no	yes
Beta	yes	yes	yes	no	no
CRSTD	*	*	no	no	no
Beta	yes	yes	no	no	no
DIVOP	yes	yes	yes	no	yes
CRSTD	**	**	*	no	no

*Negative but not statistically significant.

**Negative and statistically significant.

Table 5

Summary of Positive and Statistically Significant
Risk-Consensus Expected Return Relationships
(Unstarred or Multi-stage Growth Analysts)

Risk Proxy Independent Variable(s)	Month/Year				
	Oct 81	Apr 82	Oct 82	Apr 83	Oct 83
Beta	yes	yes	yes	no	yes
DIVOP	yes	yes	yes	no	yes
CRSTD	yes	yes	yes	*	yes
Beta DIVOP	yes yes	yes yes	yes yes	* no	no yes
Beta CRSTD	yes **	yes *	yes *	no *	* no
Beta DIVOP CRSTD	yes yes **	yes yes **	yes yes *	no yes *	no yes no

*Negative but not statistically significant.

**Negative and statistically significant.

none of the adjusted r-squared values of the regressions is greater than .50, and only 10.67 percent of these regressions have an adjusted r-squared greater than .36. Clearly the ability of commonly accepted risk measures (and historical returns) to explain levels of expected returns is not overwhelmingly high.

The relatively low level of explanatory power of risk proxies to explain expected returns raised an interesting question. Specifically, how well could historical risk proxies explain ex post returns? Based upon adjusted r-squared values, betas and standard deviations of market returns (both individually and jointly) provide a higher level of explanatory power for ex post average returns vis-a-vis ex ante consensus returns.

Empirical Analysis -- How Well Do Individual Analysts Conform to Traditional Risk-Return Relationships?

The relatively low level of explanatory power of traditional risk measures in explaining ex ante, consensus expectations indicated that there was at least the potential for the expectations of individual analysts not to conform to conventionally accepted risk-return relationships. The final phase of the study analyzes this issue. For each of the five months studied earlier, the expected returns of all firms followed by each analyst were compiled. Tests of the linear relationships between the expected returns and either a sixty month, Blume trend adjusted beta or the standard deviation of the historical returns were undertaken. Both the beta and the standard deviation of return were calculated over the sixty

months preceding the month of expectation. The results of this analysis are given in Appendix C. A summary of the Appendix is given in Table 6. During October '82, April '83, and October '83, the large majority of the analysts conform to commonly accepted risk-return behavior patterns. However, during April and October '83 less than half of the analysts have a positive and statistically significant relationship between their individual expectations for returns and either beta or standard deviation estimates. Furthermore the level of explanatory power of these tests is quite low. Less than 3.9 percent of the regressions have an adjusted r-squared value greater than .20, and 60 percent had an adjusted r-squared of less than .05. Thus on balance one cannot place a great deal of confidence in the fact that individual analysts consistently conform to the logic of conventionally accepted asset pricing theory using the risk measure estimates tested in this study.

Summary and Conclusions

The purpose of this research has been to report empirical findings on a new and interesting data base containing ex ante returns for a group of nineteen institutional investors. The data cover a period of almost two and one-half years. Among other things the data reveal that the level of homogeneity of institutional investors' return expectations is not high. However, their expectations are in general positively correlated. The average or consensus expectations of the analysts generally conform to the traditional risk-return trade-offs posited by the

Table 6

Summary Categorization of the Statistical Significance of
Individual Analysts' Positive Risk-Return Trade-Offs

β = Blume adjusted beta (calculated over the 60 months preceding month of expectation)

σ = Standard deviation of previous 60 months' return

Analyst Firm	Oct. '81 β	'81 σ	Apr. '82 β	'82 σ	Oct. '82 β	'82 σ	Apr. '83 β	'83 σ	Oct. '83 β	'83 σ
BI1 ¹	yes	yes	yes	yes	yes	yes	n/a	n/a	n/a	n/a
RB1*	yes	no	yes	yes	yes	no	yes	yes	yes	yes
RB2	yes	yes	yes	yes	*	no	**	**	no	no
MB1	yes	yes	yes	no	yes	no	**	**	*	*
RB3*	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
RB4	yes	no	yes	yes	yes	yes	no	no	no	no
RB5*	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
MB2	*	**	yes	no	yes	no	no	no	no	no
BI2*	no	*	no	*	*	*	*	**	**	**
MB3	no	no	yes	yes	yes	yes	no	no	yes	yes
RB6*	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
BI3	no	*	yes	*	no	*	no	*	no	**
RB7	*	*	yes	yes	yes	yes	yes	yes	yes	yes
BI4	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
BI5	yes	yes	yes	yes	n/a	n/a	n/a	n/a	n/a	n/a
RB8	yes	no	yes	yes	yes	yes	no	no	no	no
MB4*	yes	yes	yes	yes	yes	*	yes	no	yes	no
IA1*	yes	yes	yes	yes	no	*	*	*	*	*
MB5	yes	yes	yes	yes	yes	yes	*	*	*	*

73.7 57.9 94.7 73.7 77.8 55.6 41.2 35.3 47.1 41.2
(% statistically significant and positive at minimum of 5% level)

¹Not available after Oct. '82 for BI1 and Apr. '82 for BI5.

*Negative but not statistically significant.

**Negative and statistically significant.

theory of financial economics. Notwithstanding, when the three risk proxies used in this study are used as independent variables in explaining levels of expected consensus returns, measures of systematic risk and divergence of opinion are positively related to expected return. The third, the standard deviation of previous market returns, is negatively related to expected returns. Finally during the early months of the study, the expectations of individual analysts generally conform to the general paradigm of risk-return pricing. In the later months of the study period, the evidence supporting a positive risk-return trade-off was less convincing.

Clearly the results of this study raise many interesting and important issues that unfortunately must await future research. For example would a multi-factor, arbitrage pricing theory structure better explain the return expectations of these analysts? Do these return expectations generate excess risk - adjusted excess returns? Is there a January effect in the expectations that might explain recent empirical anomalies? The richness of these data offer a truly unique opportunity for future research.

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Appendix A

Product Moment and Spearman's Rank Order Correlations for All Possible Analysts' Joint Expectations

October 1981	(Table A-1)
April 1982	(Table A-7)
October 1982	(Table A-13)
April 1983	(Table A-19)
October 1983	(Table A-25)

PRODUCT MOMENT AND SPEARMAN RANK CORRELATIONS (OCTOBER 1981)

PRODUCT MOMENT CORRELATIONS (OCTOBER 1981)

	B11	RB1*	RB2	MB1	RB3*	RB4	RB5*	MB2	B12*	MB3
B11	1.0000	0.0811	0.3052	0.3420	0.0939	0.4469	0.1998	0.3463	-0.0901	0.1164
	78	73	121	74	66	36	110	78	66	
	0.2410	0.0050	0.0010	0.2140	0.0010	0.1220	0.0010	0.2170	0.1760	
RB1*	0.1012	1.0000	0.2341	0.0063	0.2991	0.1939	0.2813	0.1750	0.4766	0.1350
	78	127	169	138	114	64	169	108	126	
	0.1890	0.0050	0.4680	0.0010	0.0200	0.0130	0.0120	0.0010	0.0660	
RB2	0.2869	0.2560	1.0000	0.4617	0.2745	0.6449	0.2347	0.4381	-0.0503	0.4990
	73	127	179	134	127	79	175	113	125	
	0.0070	0.0020	0.0010	0.0010	0.0010	0.0190	0.0010	0.2990	0.0010	
MB1	0.2783	0.0161	0.4229	1.0000	0.1411	0.4376	0.3352	0.2692	0.0089	0.3143
	121	169	179	192	159	87	269	167	178	
	0.0010	0.4180	0.0010	0.0010	0.0260	0.0010	0.0010	0.4550	0.0010	
RB3*	0.1095	0.5710	0.1626	0.0619	1.0000	0.2007	0.4901	0.2214	0.3323	0.5482
	74	138	134	192	132	79	194	101	220	
	0.1770	0.0010	0.0300	0.1970	0.0110	0.0010	0.0010	0.0010	0.0010	
RB4	0.4773	0.2569	0.6199	0.4755	0.1594	1.0000	0.1795	0.5514	-0.0810	0.6681
	66	114	127	159	132	69	161	91	122	
	0.0010	0.0030	0.0010	0.0010	0.0340	0.0010	0.0710	0.0010	0.2230	0.0010
RB5*	0.2822	0.6655	0.0948	0.2864	0.8279	0.1821	1.0000	0.0990	0.4505	0.1600
	36	64	79	87	79	69	89	60	74	
	0.0480	0.0010	0.2030	0.0040	0.0010	0.0670	0.0010	0.1790	0.0010	0.0870
MB2	0.2538	0.1872	0.4030	0.2682	0.1765	0.5438	0.0730	1.0000	0.1345	0.5538
	110	169	175	269	194	161	89	151	183	
	0.0040	0.0070	0.0010	0.0010	0.0070	0.0010	0.2480	0.0500	0.0010	
B12*	-0.0705	0.5508	-0.0339	0.0655	0.3407	-0.0800	0.5251	0.0993	1.0000	-0.0503
	78	108	113	167	101	91	60	151	94	
	0.2700	0.0010	0.3610	0.2000	0.0010	0.2250	0.0010	0.1130	0.3160	
MB3	0.1458	0.2713	0.4456	0.3470	0.4956	0.6797	0.3211	0.5593	-0.0095	1.0000
	66	126	125	178	220	122	74	183	94	
	0.1210	0.0010	0.0010	0.0010	0.0010	0.0010	0.0030	0.0010	0.4640	0.0010

(COEFFICIENT / CASES / SIGNIFICANCE)

(COEFFICIENT / CASES / SIGNIFICANCE)

	B13	RB7	B14	B15	RB8	MB4*	IA1*	MB5
	0.1862	0.1970	0.3447	0.0206	0.4287	0.1244	0.1008	0.3005
	67	92	152	86	63	86	164	100
	0.0660	0.0300	0.0010	0.4250	0.0010	0.1270	0.0990	0.0010
	0.0604	-0.0006	0.4053	0.4910	0.0294	0.5540	0.4706	0.2327
	128	152	205	129	99	127	220	167
	0.2490	0.4970	0.0010	0.0010	0.3860	0.0010	0.0010	0.0010
	0.4231	0.4095	0.2732	0.1912	0.3254	0.2320	0.2263	0.5364
	131	158	194	141	106	139	207	165
	0.0010	0.0010	0.0010	0.0120	0.0010	0.0030	0.0010	0.0010
	0.3148	0.4174	0.1633	0.1070	0.2783	0.1258	0.1091	0.3145
	204	206	333	199	146	198	369	229
	0.0010	0.0010	0.0010	0.0660	0.0010	0.0390	0.0180	0.0010
	0.2624	0.0946	0.3517	0.1825	0.0924	0.5145	0.6111	0.1558
	134	159	216	137	109	139	238	169
	0.0010	0.1180	0.0010	0.0160	0.1700	0.0010	0.0010	0.0220
	0.4940	0.4660	0.3464	0.1583	0.5952	0.1046	0.1153	0.5573
	122	144	180	120	91	134	193	147
	0.0010	0.0010	0.0010	0.0420	0.0010	0.1140	0.0550	0.0010
	0.1541	0.0885	0.4533	0.1008	0.0828	0.7073	0.6928	0.0460
	58	85	96	68	59	80	103	81
	0.1240	0.2100	0.0010	0.2070	0.2660	0.0010	0.0010	0.3420
	0.3508	0.4935	0.1855	0.0007	0.5466	-0.0345	-0.0216	0.3642
	187	212	310	199	142	183	343	230
	0.0010	0.0010	0.0010	0.4960	0.0010	0.3220	0.3450	0.0010
	0.0709	0.0819	-0.0256	0.3312	-0.0480	0.4754	0.3160	0.0318
	124	135	202	136	93	127	213	144
	0.2170	0.1730	0.3590	0.0010	0.3240	0.0010	0.0010	0.3520
	0.3322	0.5350	0.1984	-0.1047	0.5712	0.1198	0.1720	0.5062
	121	148	200	128	102	128	221	153
	0.0010	0.0010	0.0020	0.1200	0.0010	0.0890	0.0050	0.0010

TABLE - A - 1

SPEARMAN RANK CORRELATIONS (OCTOBER 1981)

	RB6*	B13	RB7	B14	B15	RB8	MB4*	IA1*	MB5
RB1*	0.1510	0.1614	0.2286	0.3337	0.0614	0.4720	0.0507	0.1129	0.3021
	80	67	92	152	86	63	86	164	100
	0.0910	0.0960	0.0150	0.0010	0.2880	0.0010	0.3220	0.0760	0.0020
RB1*	0.4233	0.0922	-0.0242	0.3834	0.5009	-0.0288	0.5031	0.3618	0.2063
	134	128	152	205	129	99	127	220	167
	0.0010	0.1510	0.3840	0.0010	0.0010	0.3890	0.0010	0.0010	0.0040
RB2	0.3029	0.4372	0.4196	0.2664	0.1002	0.3914	0.1921	0.1909	0.5652
	130	131	158	194	141	106	139	207	165
	0.0010	0.0010	0.0010	0.0010	0.1190	0.0010	0.0120	0.0030	0.0010
MB1	0.2308	0.3800	0.4205	0.1401	0.0642	0.3045	0.0948	0.0394	0.3317
	183	204	206	333	199	146	198	369	229
	0.0010	0.0010	0.0010	0.0060	0.1840	0.0010	0.0920	0.2260	0.0010
RB3*	0.4387	0.3204	0.1054	0.2892	0.1457	0.1527	0.5562	0.4263	0.2018
	141	134	159	216	137	109	139	238	169
	0.0010	0.0010	0.0940	0.0010	0.0450	0.0570	0.0010	0.0010	0.0050
RB4	0.2483	0.5049	0.4212	0.3632	0.1624	0.6117	0.1317	0.1360	0.6066
	127	122	144	180	120	91	134	193	147
	0.0030	0.0010	0.0010	0.0010	0.0390	0.0010	0.0650	0.0300	0.0010
RB5*	0.4222	0.1724	0.1452	0.3134	0.1105	0.1797	0.5572	0.3983	0.0964
	74	58	85	96	68	59	80	103	81
	0.0010	0.0980	0.0930	0.0010	0.1850	0.0870	0.0010	0.0010	0.1960
MB2	0.2119	0.3770	0.4442	0.2120	0.0575	0.5626	-0.0108	-0.0220	0.3884
	172	187	212	310	199	142	183	343	230
	0.0030	0.0010	0.0010	0.0010	0.2110	0.0010	0.4430	0.3430	0.0010
BI2*	0.3545	0.0571	0.0708	0.0766	0.3884	-0.0549	0.4022	0.2831	-0.0030
	113	124	135	202	136	93	127	213	144
	0.0010	0.2650	0.2080	0.1400	0.0010	0.3010	0.0010	0.0010	0.4860
MB3	0.0685	0.3719	0.4738	0.2240	-0.1402	0.5937	0.0762	0.1419	0.5214
	130	121	148	200	128	102	128	221	153
	0.2200	0.0010	0.0010	0.0010	0.0580	0.0010	0.1970	0.0180	0.0010

(COEFFICIENT / CASES / SIGNIFICANCE)

TABLE - A - 2

PRODUCT MOMENT AND SPEARMAN RANK CORRELATIONS (OCTOBER 1981)

	RB6*	B13	RB7	B14	B15	RB8	MB4*	IA1*
RB6*	1.0000	0.2260	0.0248	0.2876	0.3843	0.0470	0.5267	0.3527
	121	153	210	129	99	139	223	17
	0.0070	0.3810	0.0010	0.0010	0.3220	0.0010	0.0010	0.0010
B13	0.2489	1.0000	0.4215	0.3410	0.1084	0.4482	0.1168	0.1028
	121	158	158	237	159	101	145	262
	0.0030	0.0000	0.0010	0.0010	0.0870	0.0010	0.0810	0.0490
RB7	-0.0207	0.4310	1.0000	0.1351	-0.1305	0.5295	-0.0399	-0.0892
	153	158	161	246	161	111	162	262
	0.4000	0.0010	0.0000	0.0180	0.0500	0.0010	0.3080	0.0750
B14	0.3067	0.3512	0.1270	1.0000	0.1306	0.2620	0.3954	0.1411
	210	237	246	239	166	214	439	2
	0.0010	0.0010	0.0230	0.0000	0.0220	0.0010	0.0010	0.0020
B15	0.3920	0.1318	-0.1048	0.1603	1.0000	-0.1485	0.4531	0.4050
	129	159	161	239	107	140	260	1
	0.0010	0.0490	0.0930	0.0070	0.0000	0.0640	0.0010	0.0010
RB8	0.0267	0.4434	0.5665	0.3080	-0.1192	1.0000	0.0920	0.1027
	99	101	111	166	107	102	177	1
	0.3970	0.0010	0.0010	0.0010	0.1110	0.1790	0.0870	0.0010
MB4*	0.6574	0.1971	-0.0271	0.4779	0.5116	0.0321	1.0000	0.4863
	139	145	162	214	140	102	238	1
	0.0010	0.0090	0.3660	0.0010	0.0010	0.3740	0.0010	0.0010
IA1*	0.5692	0.1485	-0.0943	0.2132	0.4285	0.1242	0.5930	1.0000
	223	262	262	439	260	177	238	2
	0.0010	0.0080	0.0640	0.0010	0.0010	0.0500	0.0010	0.0000
MB5	0.1734	0.3679	0.4228	0.2033	0.2541	0.5250	0.1868	0.2522
	165	177	184	278	172	127	158	294
	0.0130	0.0010	0.0010	0.0010	0.0010	0.0010	0.0090	0.0010

(COEFFICIENT / CASES / SIGNIFICANCE)

(ABOVE DIAGONAL - RANK CORR. BELOW DIAGONAL - PRODUCT MOMENT C)

PRODUCT MOMENT AND SPEARMAN RANK CORRELATIONS (APRIL 1982)

SPEARMAN RANK CORRELATIONS (APRIL 1982)

	RB6*	B13	RB7	B14	B15	RB8	MB4*	IA1*	MB5
RB1*	0.3879	0.3821	0.4994	0.5517	0.3688	0.3097	0.3229	0.2351	0.5048
	79	65	89	148	81	60	86	163	98
	0.0010	0.0010	0.0010	0.0010	0.0010	0.0090	0.0020	0.0020	0.0010
RB2*	0.5565	0.2279	0.2257	0.2996	0.4482	0.1907	0.4373	0.4346	0.2979
	113	106	127	167	98	82	111	181	145
	0.0010	0.0100	0.0060	0.0010	0.0010	0.0440	0.0010	0.0010	0.0010
RB2	0.5469	0.4421	0.6092	0.5984	-0.0625	0.5660	0.4529	0.4368	0.6961
	123	124	150	188	124	99	131	195	154
	0.0010	0.0010	0.0010	0.0010	0.2460	0.0010	0.0010	0.0010	0.0010
MB1	0.3531	0.3432	0.5563	0.2668	-0.0579	0.4094	0.2707	0.2450	0.3416
	174	193	193	319	172	133	187	351	216
	0.0010	0.0010	0.0010	0.0010	0.2260	0.0010	0.0010	0.0010	0.0010
RB3*	0.5025	0.4181	0.4015	0.3197	0.0448	0.3844	0.5628	0.5316	0.3881
	130	126	147	198	110	99	133	214	157
	0.0010	0.0010	0.0010	0.0010	0.3210	0.0010	0.0010	0.0010	0.0010
RB4	0.3275	0.4638	0.5829	0.5055	0.1234	0.5986	0.2694	0.2835	0.5821
	127	118	141	181	108	87	132	193	148
	0.0010	0.0010	0.0010	0.0010	0.1020	0.0010	0.0010	0.0010	0.0010
RB5*	0.5054	0.2465	0.3878	0.4044	0.0620	0.2706	0.6742	0.4142	0.3917
	72	52	81	91	60	55	76	97	78
	0.0010	0.0400	0.0010	0.0010	0.3200	0.0230	0.0010	0.0010	0.0010
MB2	0.3514	0.3864	0.5000	0.3975	0.0054	0.6060	0.2258	0.1762	0.4349
	171	182	210	309	183	137	182	343	232
	0.0010	0.0010	0.0010	0.0010	0.4720	0.0010	0.0020	0.0010	0.0010
B12*	0.4115	0.1800	0.1490	0.0996	0.1485	0.0343	0.4360	0.2608	0.1190
	104	113	123	184	122	84	111	193	133
	0.0010	0.0290	0.0510	0.0900	0.0520	0.3790	0.0010	0.0010	0.0870
MB3	0.1743	0.2471	0.5786	0.4360	-0.3019	0.5929	0.2604	0.3004	0.5528
	119	116	136	188	105	94	123	201	145
	0.0290	0.0040	0.0010	0.0010	0.0010	0.0010	0.0020	0.0010	0.0010

(COEFFICIENT / CASES / SIGNIFICANCE)

PRODUCT MOMENT AND SPEARMAN RANK CORRELATIONS (APRIL 1982)

	RB6*	B13	RB7	B14	B15	RB8	MB4*	IA1*	ME
RB6*	1.0000	0.4527	0.4402	0.4191	0.1129	0.3994	0.5965	0.4216	0.4
	117	151	151	208	115	94	138	221	16
	0.0010	0.0010	0.0010	0.0010	0.1150	0.0010	0.0010	0.0010	0.0
B13	0.4373	1.0000	0.4269	0.4370	0.0687	0.4686	0.3320	0.2491	0.4
	117	149	149	229	143	97	141	258	17
	0.0010	0.0010	0.0010	0.0010	0.2080	0.0010	0.0010	0.0010	0.0
RB7	0.3748	0.4490	1.0000	0.4119	-0.1909	0.6491	0.2870	0.2487	0.6
	151	149	149	241	147	108	157	255	17
	0.0010	0.0010	0.0010	0.0010	0.0110	0.0010	0.0010	0.0010	0.0
B14	0.2978	0.4322	0.3882	1.0000	0.0708	0.5053	0.4470	0.2519	0.5
	208	229	241	220	220	163	211	437	27
	0.0010	0.0010	0.0010	0.0010	0.1480	0.0010	0.0010	0.0010	0.0
B15	0.0992	0.0510	-0.2134	0.0643	1.0000	-0.1751	0.1871	0.1920	0.0
	115	143	147	220	220	96	125	240	15
	0.1460	0.2730	0.0050	0.1710	0.0010	0.0440	0.0190	0.0020	0.1
RB8	0.3622	0.4734	0.6412	0.4785	-0.0493	1.0000	0.3434	0.2669	0.6
	94	97	108	163	96	98	170	170	12
	0.0010	0.0010	0.0010	0.0010	0.3170	0.0010	0.0010	0.0010	0.0
MB4*	0.6700	0.4119	0.2079	0.4729	0.1924	0.2502	1.0000	0.4762	0.3
	138	141	157	211	125	98	235	235	15
	0.0010	0.0010	0.0040	0.0010	0.0160	0.0060	0.0010	0.0010	0.0
IA1*	0.5528	0.2934	0.2360	0.2688	0.1762	0.2914	0.5641	1.0000	0.2
	221	258	255	437	240	170	235	235	29
	0.0010	0.0010	0.0010	0.0010	0.0030	0.0010	0.0010	0.0010	0.0
MB5	0.4440	0.3438	0.6427	0.4272	0.0871	0.5885	0.2413	0.2089	1.0
	165	172	179	277	156	121	159	297	111
	0.0010	0.0010	0.0010	0.0010	0.1400	0.0010	0.0010	0.0010	0.0

(COEFFICIENT / CASES / SIGNIFICANCE)

(ABOVE DIAGONAL - RANK CORR. BELOW DIAGONAL - PRODUCT MOMENT CO

PRODUCT MOMENT AND SPEARMAN RANK CORRELATIONS (OCTOBER 1982)

B11	R81*	R82	MB1	R83*	R84	R85*	MB2	B12*	MB3
1.0000	0.3218	-0.0218	0.4455	0.3697	0.5275	0.4514	0.2483	-0.1521	0.3484
#####	62	66	113	63	61	32	105	65	57
#####	0.0060	0.4310	0.0010	0.0020	0.0010	0.0050	0.0060	0.1140	0.0040
0.3291	1.0000	0.0875	0.2426	0.2740	-0.1538	0.4277	0.0403	0.4244	-0.1166
62	#####	108	118	106	93	50	144	80	95
0.0050	#####	0.1850	0.0050	0.0030	0.0710	0.0010	0.3160	0.0010	0.1310
-0.1508	0.1632	1.0000	0.2606	0.1918	0.3926	0.0021	0.3893	0.1385	0.2621
66	108	#####	156	125	122	68	171	92	114
0.1130	0.0460	#####	0.0010	0.0170	0.0010	0.4940	0.0010	0.0940	0.0030
0.5673	0.2835	0.2751	1.0000	0.2000	0.4141	0.3021	0.2650	0.1740	0.2870
113	118	156	#####	151	140	68	233	131	138
0.0010	0.0010	0.0010	#####	0.0070	0.0010	0.0070	0.0010	0.0240	0.0010
0.4598	0.4033	0.2149	0.1337	1.0000	0.2634	0.4823	0.2623	0.1628	0.5192
63	106	125	151	#####	120	67	173	75	189
0.0010	0.0010	0.0080	0.0510	#####	0.0020	0.0010	0.0010	0.0820	0.0010
0.2924	-0.0419	0.3408	0.4007	0.2002	1.0000	-0.0443	0.4693	-0.1193	0.6063
61	93	122	140	120	#####	61	158	73	111
0.0110	0.3450	0.0010	0.0010	0.0140	#####	0.3680	0.0010	0.1580	0.0010
0.4588	0.4789	0.0110	0.2996	0.5861	-0.0981	1.0000	0.0384	0.3185	0.0956
32	50	68	68	67	61	#####	78	41	61
0.0040	0.0010	0.4650	0.0070	0.0010	0.2260	#####	0.3700	0.0220	0.2320
0.1830	0.0281	0.3532	0.2778	0.1668	0.4525	-0.0098	1.0000	0.0004	0.5178
105	144	171	233	173	158	78	#####	122	160
0.0310	0.3690	0.0010	0.0010	0.0140	0.0010	0.4660	#####	0.4990	0.0010
-0.0762	0.4727	0.1887	0.1043	0.2483	-0.1273	0.5273	-0.0314	1.0000	-0.2636
65	80	92	131	75	73	41	122	#####	69
0.2730	0.0010	0.0360	0.1180	0.0160	0.1420	0.0010	0.3660	#####	0.0150
0.5139	0.0438	0.2713	0.2861	0.4695	0.5907	0.0621	0.4544	-0.2778	1.0000
57	95	114	138	189	111	61	160	69	#####
0.0010	0.3370	0.0020	0.0010	0.0010	0.0010	0.3170	0.0010	0.0100	#####

(COEFFICIENT / CASES / SIGNIFICANCE)

(ABOVE DIAGONAL - RANK CORR. BELOW DIAGONAL - PRODUCT MOMENT CORR.)

PRODUCT MOMENT CORRELATIONS (OCTOBER 1982)

	R86*	B13	R87	B14	B15	R88	MB4*	MB1*
B11	0.3491	0.1161	0.4942	0.4440	-	0.4964	0.0293	0.1431
	70	71	85	142	-	55	81	157
	0.0020	0.1670	0.0010	0.0010	-	0.0010	0.3970	0.0370
RE1*	0.4739	0.2337	0.1621	0.1879	-	0.1807	0.3638	0.4337
	110	112	128	167	-	82	113	180
	0.0010	0.0070	0.0340	0.0080	-	0.0520	0.0010	0.0010
R82	0.2318	0.2223	0.3280	0.1628	-	0.2234	0.2067	0.3305
	127	128	155	192	-	104	135	200
	0.0040	0.0060	0.0010	0.0120	-	0.0110	0.0080	0.0010
MB1	0.1449	0.4083	0.5494	0.2890	-	0.1816	0.3366	0.1422
	159	182	180	298	-	123	175	327
	0.0340	0.0010	0.0010	0.0010	-	0.0220	0.0010	0.0050
R83*	0.5984	0.3145	0.3080	0.3142	-	0.2995	0.4883	0.5398
	125	127	143	188	-	94	127	206
	0.0010	0.0010	0.0010	0.0010	-	0.0020	0.0010	0.0010
R84	0.0586	0.4697	0.6046	0.5524	-	0.6829	0.1859	0.0734
	120	117	138	173	-	86	126	186
	0.2620	0.0010	0.0010	0.0010	-	0.0010	0.0190	0.1600
R85*	0.4933	0.0872	0.1972	0.2441	-	-0.2173	0.6107	0.5373
	62	50	74	82	-	49	68	88
	0.0010	0.2730	0.0460	0.0140	-	0.0670	0.0010	0.0010
MB2	0.1978	0.4002	0.5226	0.3567	-	0.5293	0.0809	0.1355
	168	189	212	306	-	137	177	344
	0.0050	0.0010	0.0010	0.0010	-	0.0010	0.1420	0.0060
B12*	0.5688	0.3705	-0.0154	-0.0248	-	-0.0273	0.6424	0.5016
	92	107	110	168	-	77	99	177
	0.0010	0.0010	0.4370	0.3750	-	0.4070	0.0010	0.0010
MB3	0.1670	0.2255	0.6440	0.5217	-	0.6241	0.1033	0.1942
	114	114	131	174	-	88	116	190
	0.0380	0.0080	0.0010	0.0010	-	0.0010	0.1350	0.0040

(COEFFICIENT / CASES / SIGNIFICANCE)

SPEARMAN RANK CORRELATIONS (OCTOBER 1982)

	RB6*	B13	RB7	B14	B15	RB8	MB4*	IA1*	MB5
B11	0.3739	0.1446	0.4672	0.5655		0.3590	0.0902	0.0909	0.6653
	70	71	85	142	-	55	81	157	94
	0.0010	0.1150	0.0010	0.0010		0.0040	0.2120	0.1290	0.0010
RB1*	0.4840	0.1914	0.1217	0.2410		0.1739	0.3422	0.3607	0.0621
	110	112	128	167	-	82	113	180	143
	0.0010	0.0220	0.0860	0.0010		0.0600	0.0010	0.0010	0.2310
RB2	0.1436	0.2634	0.2984	0.1409		0.2920	0.1660	0.2840	0.2107
	127	128	155	192	-	104	135	200	159
	0.0540	0.0020	0.0010	0.0260		0.0020	0.0280	0.0010	0.0040
MB1	0.2431	0.4461	0.4763	0.2972		0.2403	0.3088	0.1641	0.2347
	159	182	180	298	-	123	175	327	203
	0.0020	0.0010	0.0010	0.0010		0.0040	0.0010	0.0020	0.0010
RB3*	0.5482	0.3610	0.2374	0.3689		0.3283	0.5544	0.4397	0.5229
	125	127	143	188	-	94	127	206	151
	0.0010	0.0010	0.0030	0.0010		0.0010	0.0010	0.0010	0.0010
RB4	0.1048	0.4036	0.6793	0.5581		0.7099	0.1700	0.0334	0.5737
	120	117	138	173	-	86	126	186	143
	0.1280	0.0010	0.0010	0.0010		0.0010	0.0290	0.3260	0.0010
RB5*	0.4097	0.2679	0.1455	0.3295		-0.0839	0.5287	0.4542	0.2431
	62	50	74	82	-	49	68	88	73
	0.0010	0.0310	0.1090	0.0020		0.2840	0.0010	0.0010	0.0200
MB2	0.1806	0.3710	0.5315	0.3813		0.5421	0.0826	0.1352	0.5072
	168	189	212	306	-	137	177	344	232
	0.0100	0.0010	0.0010	0.0010		0.0010	0.1380	0.0070	0.0010
B12*	0.4981	0.2896	-0.0154	0.0324		-0.0741	0.5149	0.3705	0.0470
	92	107	110	168	-	77	99	177	120
	0.0010	0.0020	0.4370	0.3390		0.2620	0.0010	0.0010	0.3060
MB3	0.1345	0.2422	0.6491	0.4512		0.6434	0.1148	0.1865	0.6685
	114	114	131	174	-	88	116	190	137
	0.0770	0.0050	0.0010	0.0010		0.0010	0.1100	0.0060	0.0010

(COEFFICIENT / CASES / SIGNIFICANCE)

PRODUCT MOMENT AND SPEARMAN RANK CORRELATIONS (OCTOBER 1982)

	RB6*	B13	RB7	B14	B15	RB8	MB4*	IA1*	MB5
RB6*	1.0000	0.4641	0.1853	0.3626		0.1865	0.5767	0.3764	0.3035
	122	148	202	-		94	135	216	162
	0.0010	0.0010	0.0130	0.0010		0.0360	0.0010	0.0010	0.0010
B13	0.4620	1.0000	0.4547	0.4118		0.4083	0.3552	0.3505	0.4059
	122	158	158	238	-	99	144	264	180
	0.0010	0.0010	0.0010	0.0010		0.0010	0.0010	0.0010	0.0010
RB7	0.1702	0.4501	1.0000	0.4983		0.6433	0.0161	0.1409	0.6373
	148	158	247	247	-	108	158	257	183
	0.0190	0.0010	0.0010	0.0010		0.0010	0.4210	0.0120	0.0010
B14	0.3023	0.4021	0.5533	1.0000		0.4989	0.3070	0.1172	0.6363
	202	238	247	311	-	160	210	436	279
	0.0010	0.0010	0.0010	0.0010		0.0010	0.0010	0.0080	0.0010
B15	-	-	-	-	1.0000				
					311				
					311				
RB8	0.2411	0.5073	0.6672	0.4767		1.0000	0.0377	0.1230	0.6470
	94	99	108	160	-	311	95	167	122
	0.0100	0.0010	0.0010	0.0010		311	0.3590	0.0570	0.0010
MB4*	0.6704	0.3946	0.0363	0.3170		0.0817	1.0000	0.4468	0.2483
	135	144	158	210	-	95	311	230	156
	0.0010	0.0010	0.3250	0.0010		0.2160	311	0.0010	0.0010
IA1*	0.4741	0.3814	0.1516	0.1456		0.1260	0.6202	1.0000	0.0774
	216	264	257	436	-	167	230	311	297
	0.0010	0.0010	0.0070	0.0010		0.0520	0.0010	311	0.0920
MB5	0.3838	0.3372	0.6770	0.5858		0.5928	0.1742	0.0546	1.0000
	162	180	183	279	-	122	156	297	311
	0.0010	0.0010	0.0010	0.0010		0.0010	0.0150	0.1740	311

(COEFFICIENT / CASES / SIGNIFICANCE)

(ABOVE DIAGONAL - RANK CORR. BELOW DIAGONAL - PRODUCT MOMENT CORR.)

PRODUCT MOMENT AND SPEARMAN RANK CORRELATIONS (APRIL 1983)

	B11	F81*	F82	MB1	MB3*	RE4	RE5*	RE2	B12*
B11	1.0000								
	#####								
	#####								
RB1*		1.0000	-0.0351	0.0681	0.3343	-0.0971	0.5699	0.1241	0.3645
		#####	107	126	104	93	48	136	80
		#####	0.3600	0.2250	0.0010	0.1780	0.0010	0.0750	0.0010
RB2		-0.0149	1.0000	0.1471	0.0634	0.2675	-0.0102	0.3997	0.3603
		107	#####	158	121	116	58	163	89
		0.4390	#####	0.0330	0.2450	0.0020	0.4700	0.0010	0.0010
MB1		0.0855	0.1403	1.0000	0.1550	0.3396	0.1629	0.2157	0.2370
		126	158	#####	159	140	61	242	136
		0.1710	0.0390	#####	0.0260	0.0010	0.1050	0.0010	0.0030
RB3*		0.3548	0.1403	0.0857	1.0000	0.2943	0.4152	0.2503	0.0731
		104	121	159	#####	116	62	164	71
		0.0010	0.0620	0.1410	#####	0.0010	0.0010	0.0010	0.2730
RB4		-0.0043	0.2772	0.3744	0.1405	1.0000	-0.0764	0.3942	-0.1540
		93	116	140	116	#####	57	153	70
		0.4840	0.0010	0.0010	0.0660	#####	0.2870	0.0010	0.1020
RB5*		0.5292	0.0344	0.1378	0.5834	-0.0751	1.0000	0.0382	0.3768
		48	58	61	62	57	#####	71	36
		0.0010	0.3990	0.1450	0.0010	0.2890	#####	0.3760	0.0120
MB2		0.0967	0.4041	0.1876	0.1813	0.4165	0.1338	1.0000	0.1420
		136	163	242	164	153	71	#####	119
		0.1310	0.0010	0.0020	0.0100	0.0010	0.1330	#####	0.0620
B12*		0.5533	0.3790	0.1170	0.1327	-0.0853	0.7097	0.0354	1.0000
		80	89	136	71	70	36	119	#####
		0.0010	0.0010	0.0870	0.1350	0.2410	0.0010	0.3510	#####
MB3		0.0251	0.3220	0.1489	0.3702	0.3662	0.0241	0.3888	-0.1086
		94	109	143	180	107	56	148	67
		0.4050	0.0010	0.0380	0.0010	0.0010	0.4300	0.0010	0.1910

(COEFFICIENT / CASES / SIGNIFICANCE)

(ABOVE DIAGONAL - RANK CORR. BELOW DIAGONAL - PRODUCT MOMENT CORR.)

PRODUCT MOMENT CORRELATIONS (APRIL 1983)

	RB6*	B13	RE7	B14	B15	RE8	MB4*	IA1*	ME5
B11									
RB1*	0.5607	0.3587	0.0760	0.2738		0.1930	0.5436	0.4808	0.0206
	109	105	122	152		84	108	169	135
	0.0010	0.0010	0.2030	0.0010		0.0390	0.0010	0.0010	0.4060
RB2	0.1331	0.1445	0.2049	0.0535		0.1343	0.2397	0.2373	0.1143
	121	125	147	183		100	125	193	150
	0.0730	0.0540	0.0060	0.2360		0.0910	0.0040	0.0010	0.0820
MB1	0.0703	0.4121	0.3848	0.1324		0.0777	0.2168	0.0836	0.3163
	165	190	186	303		131	176	339	207
	0.1850	0.0010	0.0010	0.0110		0.1890	0.0020	0.0620	0.0010
RB3*	0.8391	0.3449	0.2149	0.2527		0.3702	0.7777	0.6303	0.1646
	119	120	135	175		93	120	200	143
	0.0010	0.0010	0.0060	0.0010		0.0010	0.0010	0.0010	0.0250
RB4	-0.0190	0.4651	0.5484	0.4136		0.5624	0.0862	0.0545	0.5213
	114	110	130	164		86	121	179	138
	0.4210	0.0010	0.0010	0.0010		0.0010	0.1740	0.2340	0.0010
RB5*	0.5390	0.0765	0.0750	0.0713		-0.2165	0.6138	0.4557	-0.1641
	57	46	66	68		44	64	77	64
	0.0010	0.3070	0.2750	0.2820		0.0790	0.0010	0.0010	0.0970
MB2	0.1181	0.3522	0.4202	0.2499		0.4141	0.2233	0.1626	0.3501
	161	177	202	292		134	169	328	214
	0.0680	0.0010	0.0010	0.0010		0.0010	0.0020	0.0020	0.0010
B12*	0.6666	0.4166	-0.0656	0.1180		-0.0612	0.6341	0.5590	-0.0781
	89	100	108	165		76	97	176	113
	0.0010	0.0010	0.2500	0.0660		0.3000	0.0010	0.0010	0.2060
MB3	0.1066	0.3648	0.5495	0.3534		0.4164	0.1253	0.1376	0.6458
	108	106	124	161		86	108	180	127
	0.1360	0.0010	0.0010	0.0010		0.0010	0.0980	0.0330	0.0010

(COEFFICIENT / CASES / SIGNIFICANCE)

SPEARMAN RANK CORRELATIONS (APRIL 1983)

	RB6*	B13	RB7	B14	B15	RB8	MB4*	IA1*	MB5
RB1	-	-	-	-	-	-	-	-	-
RB1*	0.5556	0.3263	-0.0006	0.3296		0.1052	0.5026	0.3859	-0.005
	109	105	122	152	-	84	108	169	135
	0.0010	0.0010	0.4980	0.0010		0.1710	0.0010	0.0010	0.475
RB2	0.0307	0.1471	0.1979	0.0471		0.1410	0.1658	0.2415	0.118
	121	125	147	183	-	100	125	193	150
	0.3690	0.0510	0.0090	0.2640		0.0810	0.0330	0.0010	0.075
MB1	0.1997	0.4393	0.4229	0.1813		0.1977	0.2755	0.1960	0.343
	165	190	186	303	-	131	176	339	207
	0.0060	0.0010	0.0010	0.0010		0.0120	0.0010	0.0010	0.001
RB3*	0.6121	0.3573	0.2001	0.3687		0.3627	0.5324	0.3670	0.229
	119	120	135	175	-	93	120	200	143
	0.0010	0.0010	0.0100	0.0010		0.0010	0.0010	0.0010	0.003
RB4	0.1096	0.4077	0.5487	0.4196		0.5415	0.1931	0.0803	0.503
	114	110	130	164	-	86	121	179	138
	0.1230	0.0010	0.0010	0.0010		0.0010	0.0170	0.1430	0.001
RB5*	0.5235	0.1645	0.0225	0.0971		0.0041	0.4038	0.3935	-0.198
	57	46	66	68	-	44	64	77	64
	0.0010	0.1380	0.4290	0.2160		0.4900	0.0010	0.0010	0.058
MB2	0.1938	0.3623	0.4264	0.3093		0.4447	0.3258	0.2390	0.366
	161	177	202	292	-	134	169	328	214
	0.0070	0.0010	0.0010	0.0010		0.0010	0.0010	0.0010	0.001
B12*	0.5853	0.4052	-0.0419	0.1510		-0.1222	0.4574	0.4748	-0.113
	89	100	108	165	-	76	97	176	113
	0.0010	0.0010	0.3340	0.0270		0.1470	0.0010	0.0010	0.117
MB3	0.1189	0.3488	0.5862	0.3591		0.4644	0.1622	0.1593	0.653
	108	106	124	161	-	86	108	180	127
	0.1110	0.0010	0.0010	0.0010		0.0010	0.0470	0.0170	0.001

(COEFFICIENT / CASES / SIGNIFICANCE)

PRODUCT MOMENT AND SPEARMAN RANK CORRELATIONS (APRIL 1983)

	RB6*	B13	RB7	B14	B15	RB8	MB4*	IA1*	MB5
RB6*	1.0000	0.3892	0.0654	0.2540		0.2297	0.6327	0.3891	0.0225
	114	143	193	-		92	128	210	153
	0.0010	0.0010	0.2190	0.0010		0.0140	0.0010	0.0010	0.3920
B13	0.3290	1.0000	0.3801	0.4692		0.3880	0.3882	0.3946	0.4677
	114	143	149	229	-	94	137	257	167
	0.0010	0.0010	0.0010	0.0010		0.0010	0.0010	0.0010	0.0010
RB7	0.0537	0.4093	1.0000	0.4137		0.5962	0.0003	-0.0088	0.7222
	143	149	231	231	-	104	149	245	169
	0.2620	0.0010	0.0010	0.0010		0.0010	0.4990	0.4460	0.0010
B14	0.2008	0.4842	0.3645	1.0000		0.3146	0.3459	0.0588	0.4489
	193	229	231	231	-	155	195	417	254
	0.0030	0.0010	0.0010	0.0010		0.0010	0.0010	0.1160	0.0010
B15	-	-	-	-	1.0000	-	-	-	-
	-	-	-	-	1.0000	-	-	-	-
RB8	0.2571	0.4880	0.5715	0.3083		1.0000	0.2289	0.2739	0.5779
	92	94	104	155	-	1.0000	91	166	119
	0.0070	0.0010	0.0010	0.0010		0.0010	0.0150	0.0010	0.0010
MB4*	0.8947	0.3663	0.0769	0.2635		0.2656	1.0000	0.4567	0.1813
	128	137	149	195	-	91	1.0000	216	147
	0.0010	0.0010	0.1760	0.0010		0.0050	0.0010	0.0010	0.0140
IA1*	0.7138	0.4232	0.0167	0.0440		0.2476	0.7608	1.0000	0.1292
	210	257	245	417	-	166	216	1.0000	272
	0.0010	0.0010	0.3970	0.1850		0.0010	0.0010	0.0010	0.0170
MB5	0.0313	0.5652	0.6932	0.3217		0.5983	0.1676	0.1422	1.0000
	153	167	169	254	-	119	147	272	1.0000
	0.3500	0.0010	0.0010	0.0010		0.0010	0.0210	0.0090	0.0010

(COEFFICIENT / CASES / SIGNIFICANCE)

(ABOVE DIAGONAL - RANK CORR. BELOW DIAGONAL - PRODUCT MOMENT CORR.)

PRODUCT MOMENT AND SPEARMAN RANK CORRELATIONS (OCTOBER 1983)

PRODUCT MOMENT CORRELATIONS (OCTOBER 1983)

BI1	RB1*	RB2	MB1	RB3*	RB4	RB5*	MB2	BI2*	MB3
1.0000									
#####									
#####									
RB1*	1.0000	0.1252	0.1400	0.2760	-0.0656	0.3968	0.1766	0.4593	-0.1416
	#####	98	130	96	57	43	137	69	87
	#####	0.1100	0.0570	0.0040	0.3150	0.0050	0.0200	0.0010	0.0960
RB2	0.1170	1.0000	0.1954	0.1710	0.4985	-0.0502	0.3922	0.2565	0.5253
	98	#####	164	119	72	59	165	80	109
	0.1260	#####	0.0070	0.0320	0.0010	0.3530	0.0010	0.0110	0.0010
MB1	0.1576	0.2022	1.0000	0.0525	0.1984	0.1399	0.1922	0.2298	0.0762
	130	164	#####	159	87	64	253	122	148
	0.0370	0.0050	#####	0.2560	0.0330	0.1360	0.0020	0.0060	0.1790
RB3*	0.4403	0.2266	0.0469	1.0000	0.2469	0.3806	0.2548	0.0586	0.4060
	96	119	159	#####	69	60	157	62	177
	0.0010	0.0070	0.2790	#####	0.0210	0.0020	0.0010	0.3260	0.0010
RB4	-0.0223	0.5207	0.2865	0.2078	1.0000	-0.2842	0.4188	-0.2761	0.5166
	57	72	87	69	#####	42	89	48	67
	0.4350	0.0010	0.0040	0.0430	#####	0.0350	0.0010	0.0290	0.0010
RB5*	0.4500	-0.0742	0.1427	0.5819	-0.2849	1.0000	0.1440	0.5074	-0.0961
	43	59	64	60	42	#####	69	31	55
	0.0010	0.2880	0.1300	0.0010	0.0340	#####	0.1190	0.0020	0.2430
MB2	0.1372	0.4198	0.2652	0.2153	0.4057	0.0604	1.0000	0.1274	0.4641
	137	165	253	157	89	69	#####	106	147
	0.0550	0.0010	0.0010	0.0030	0.0010	0.3110	#####	0.0970	0.0010
BI2*	0.5813	0.2387	0.2361	0.1002	-0.2433	0.7407	0.0380	1.0000	-0.2892
	69	80	122	62	48	31	106	#####	58
	0.0010	0.0160	0.0040	0.2190	0.0480	0.0010	0.3490	#####	0.0140
MB3	-0.0494	0.5412	0.1681	0.3660	0.5017	0.0077	0.4137	-0.2521	1.0000
	87	109	148	177	67	55	147	58	#####
	0.3250	0.0010	0.0210	0.0010	0.0010	0.4780	0.0010	0.0280	#####

(COEFFICIENT / CASES / SIGNIFICANCE)

(ABOVE DIAGONAL - RANK CORR. BELOW DIAGONAL - PRODUCT MOMENT CORR.)

BI1

RE1*

RB2

MB1

RB3*

RB4

RB5*

MB2

BI2*

MB3

(COEFFICIENT / CASES / SIGNIFICANCE)

RB6*	BI3	RB7	BI4	BI5	RB8	MB4*	IA1*	MB5
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0.5030	0.3865	0.1520	0.0711		0.0950	0.3886	0.2897	0.0444
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101	91	118	153		74	79	170	128
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0.0010	0.0010	0.0500	0.1910		0.2100	0.0010	0.0010	0.3090
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0.1474	0.3415	0.5427	0.1761		0.3966	0.1132	0.1009	0.3600
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119	107	144	174		96	92	190	152
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0.0550	0.0010	0.0010	0.0100		0.0010	0.1410	0.0830	0.0010
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0.1036	0.3169	0.1773	0.1793		0.0792	0.2387	0.2754	0.3949
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163	168	185	297		128	130	349	216
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0.0940	0.0010	0.0080	0.0010		0.1870	0.0030	0.0010	0.0010
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0.6091	0.3786	0.2087	0.1940		0.3672	0.5533	0.3082	0.1759
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114	102	129	169		87	89	192	136
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0.0010	0.0010	0.0090	0.0060		0.0010	0.0010	0.0010	0.0200
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-0.1052	0.4122	0.5451	0.3131		0.5859	0.0738	-0.3045	0.5660
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71	58	79	99		50	53	105	83
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0.1910	0.0010	0.0010	0.0010		0.0010	0.3000	0.0010	0.0010
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0.5015	0.2273	-0.1138	0.0717		-0.3578	0.7624	0.4265	-0.0588
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55	39	64	65		41	46	75	61
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0.0010	0.0820	0.1850	0.2850		0.0110	0.0010	0.0010	0.3260
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0.2016	0.2407	0.4499	0.2735		0.3802	0.2231	0.0907	0.3595
--------	--------	--------	--------	--	--------	--------	--------	--------

156	152	193	278		128	125	326	214
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0.0060	0.0010	0.0010	0.0010		0.0010	0.0060	0.0510	0.0010
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0.6931	0.4098	0.1034	0.1675		0.0738	0.4960	0.5378	0.1595
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79	65	91	143		61	63	155	99
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0.0010	0.0010	0.1650	0.0230		0.2860	0.0010	0.0010	0.0570
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0.0968	0.3694	0.6072	0.2547		0.4556	0.1768	0.0848	0.4969
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106	94	119	158		82	81	178	125
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0.1620	0.0010	0.0010	0.0010		0.0010	0.0570	0.1300	0.0010
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SPEARMAN RANK CORRELATIONS (OCTOBER 1983)

	RB6*	BI3	RB7	BI4	BI5	RB8	MB4*	IA1*	MB5
BI1	-	-	-	-	-	-	-	-	-
RB1*	0.5253	0.3290	0.1506	0.1446	-	0.0494	0.3492	0.2108	0.0814
	101	91	118	153	-	74	79	170	128
	0.0010	0.0010	0.0520	0.0380	-	0.3390	0.0010	0.0030	0.1810
RB2	0.1188	0.2555	0.5389	0.2501	-	0.3796	0.0028	0.1005	0.4201
	119	107	144	174	-	96	92	190	152
	0.0990	0.0040	0.0010	0.0010	-	0.0010	0.4900	0.0840	0.0010
MB1	0.1667	0.3872	0.1822	0.1671	-	0.0135	0.2347	0.2470	0.3425
	163	168	185	297	-	128	130	349	216
	0.0170	0.0010	0.0070	0.0020	-	0.4410	0.0040	0.0010	0.0010
RB3*	0.5335	0.3367	0.2751	0.2479	-	0.3774	0.3782	0.2709	0.2158
	114	102	129	169	-	87	89	192	136
	0.0010	0.0010	0.0010	0.0010	-	0.0010	0.0010	0.0010	0.0060
RB4	-0.0357	0.4419	0.5146	0.3897	-	0.6206	-0.0338	-0.3109	0.5099
	71	58	79	99	-	50	53	105	83
	0.3840	0.0010	0.0010	0.0010	-	0.0010	0.4060	0.0010	0.0010
RB5*	0.6204	0.0991	-0.2098	0.0875	-	-0.1321	0.5059	0.3387	-0.0844
	55	39	64	65	-	41	46	75	61
	0.0010	0.2750	0.0490	0.2450	-	0.2060	0.0010	0.0020	0.2590
MB2	0.2367	0.2492	0.4313	0.2899	-	0.3461	0.1159	0.0243	0.3612
	156	152	193	278	-	128	125	326	214
	0.0020	0.0010	0.0010	0.0010	-	0.0010	0.0990	0.3310	0.0010
BI2*	0.6222	0.1964	0.0688	0.2316	-	-0.0467	0.4925	0.4079	0.1233
	79	65	91	143	-	61	63	155	99
	0.0010	0.0550	0.2590	0.0030	-	0.3610	0.0010	0.0010	0.1120
MB3	-0.0190	0.3072	0.5708	0.3369	-	0.4785	0.0069	-0.0239	0.5113
	106	94	119	158	-	82	81	178	125
	0.4240	0.0020	0.0010	0.0010	-	0.0010	0.4760	0.3760	0.0010

(COEFFICIENT / CASES / SIGNIFICANCE)

PRODUCT MOMENT AND SPEARMAN RANK CORRELATIONS (OCTOBER 1983)

	RB6*	BI3	RB7	BI4	BI5	RB8	MB4*	IA1*	MB5
RB6*	1.0000	0.3208	0.1242	0.2302	-	0.1937	0.4673	0.3940	0.0823
	88888	94	134	180	-	86	88	202	149
	88888	0.0010	0.0770	0.0010	-	0.0370	0.0010	0.0010	0.1600
BI3	0.4071	1.0000	0.2180	0.2913	-	0.3005	0.3265	0.3101	0.3266
	94	88888	126	180	-	75	87	212	144
	0.0010	88888	0.0080	0.0010	-	0.0050	0.0020	0.0010	0.0010
RB7	0.1661	0.2389	1.0000	0.3314	-	0.5181	-0.2961	-0.2112	0.4674
	134	126	88888	215	-	100	103	233	167
	0.0280	0.0040	88888	0.0010	-	0.0010	0.0020	0.0010	0.0010
BI4	0.1840	0.3378	0.2148	1.0000	-	0.2471	0.3064	-0.0242	0.3775
	180	180	215	88888	-	143	138	396	242
	0.0070	0.0010	0.0010	88888	-	0.0020	0.0010	0.3160	0.0010
BI5	-	-	-	-	1.0000	-	-	-	-
	-	-	-	-	88888	-	-	-	-
	-	-	-	-	88888	-	-	-	-
RB8	0.2573	0.3822	0.5225	0.1680	-	1.0000	-0.0267	-0.0515	0.3767
	86	75	100	143	-	88888	65	158	115
	0.0080	0.0010	0.0010	0.0220	-	88888	0.4170	0.2610	0.0010
MB4*	0.5418	0.4712	-0.2394	0.3164	-	0.0721	1.0000	0.4820	0.2127
	88	87	103	138	-	65	88888	156	114
	0.0010	0.0010	0.0070	0.0010	-	0.2840	88888	0.0010	0.0120
IA1*	0.5342	0.4218	-0.1485	0.0678	-	0.0065	0.5440	1.0000	0.1037
	202	212	233	396	-	158	156	88888	271
	0.0010	0.0010	0.0120	0.0890	-	0.4680	0.0010	88888	0.0450
MB5	0.0825	0.3807	0.4939	0.2442	-	0.3946	0.2465	0.2046	1.0000
	149	144	167	242	-	115	114	271	88888
	0.1590	0.0010	0.0010	0.0010	-	0.0010	0.0040	0.0010	88888

(COEFFICIENT / CASES / SIGNIFICANCE)

(ABOVE DIAGONAL - RANK CORR. BELOW DIAGONAL - PRODUCT MOMENT CORR.)

Regression Analysis of Analysts' Average or Consensus Expectations

B1(a)	October 1981 - All Analysts
B1(b)	October 1981 - Starred Analysts
B1(c)	October 1981 - Unstarred Analysts
B7(a)	April 1982 - All Analysts
B7(b)	April 1982 - Starred Analysts
B7(c)	April 1982 - Unstarred Analysts
B13(a)	October 1982 - All Analysts
B13(b)	October 1982 - Starred Analysts
B13(c)	October 1982 - Unstarred Analysts
B19(a)	April 1983 - All Analysts
B19(b)	April 1983 - Starred Analysts
B19(c)	April 1983 - Unstarred Analysts
B25(a)	October 1983 - All Analysts
B25(b)	October 1983 - Starred Analysts
B25(c)	October 1983 - Unstarred Analysts

TABLE - P 1 (a)

Results from Cross - Sectional Regressions

Dependent Variable	Analysts	.....	ALL	1981					
				Month	.....	October	1981		
				Independent Variables				Adjusted R-Square	Cases
	INTERCEPT	BETA	DIVOP	CRRET1	CRSTD1	CRR1A	CRR1G		
EXPRET	0.14570 (31.651)	0.03570 (7.8716)	-	-	-	-	-	0.13250	400
EXPRET	0.16087 (80.577)	-	0.73339 (11.122)	-	-	-	-	0.23520	400
EXPRET	0.16200 (49.011)	-	-	-	0.24222 (6.0573)	-	-	0.08210	400
EXPRET	0.17570 (136.90)	-	-	0.45747 (5.8659)	-	-	-	0.07730	400
EXPRET	0.14491 (34.229)	0.01947 (4.2514)	0.60896 (8.5893)	-	-	-	-	0.26660	400
EXPRET	0.14361 (29.318)	0.04562 (4.9714)	-	-	-0.09773 (-1.2427)	-	-	0.13370	400
EXPRET	0.13975 (31.242)	0.04233 (5.0693)	0.65778 (9.1819)	-	-0.23820 (-3.2577)	-	-	0.28400	400
EXPRET	0.14276 (30.894)	0.04127 (4.9649)	0.64827 (9.0888)	0.20472 (2.3933)	-0.29096 (-3.8305)	-	-	0.29240	400
EXPRET	0.14954 (30.357)	0.02950 (5.4870)	-	-	-	0.01588 (2.1263)	-	0.14010	400
EXPRET	0.15072 (30.412)	0.02802 (5.2131)	-	-	-	-	0.01580 (2.6162)	0.14510	400
CRRET1	-0.02015 (-7.8621)	0.03255 (12.889)	-	-	-	-	-	0.29270	400
CRRET1	-0.01225 (-7.1792)	-	-	-	0.30788 (14.918)	-	-	0.35700	400
CRRET1	-0.01443 (-5.5449)	0.00540 (1.1087)	-	-	0.26761 (6.4069)	-	-	0.35740	400

(Numbers in parentheses are T - Values)

(Numbers in parentheses are T - Values)

TABLE - P 1 (b)

Results from Cross - Sectional Regressions

Analysts			STARRED	Month							October	1981
Dependent Variable	Independent			Variables							Adjusted			
	INTERCEPT	BETA	DIVOP	CRRET1	CRSTD1	CRR1A	CRR1G	R-Square	Cases					
EXPRET	0.11605 (9.0244)	0.06749 (5.0174)	-	-	-	-	-	0.17000	119					
EXPRET	0.15780 (38.704)	-	1.20700 (6.0417)	-	-	-	-	0.23130	119					
EXPRET	0.14873 (15.746)	-	-	-	0.43811 (3.3732)	-	-	0.08080	119					
EXPRET	0.16916 (69.621)	-	-	1.15440 (6.4672)	-	-	-	0.25700	119					
EXPRET	0.12653 (10.265)	0.03866 (2.6802)	0.91778 (4.1228)	-	-	-	-	0.26990	119					
EXPRET	0.10924 (8.0894)	0.10331 (3.8954)	-	-	-0.38050 (-1.5637)	-	-	0.18020	119					
EXPRET	0.11892 (9.2945)	0.07942 (3.1323)	0.94481 (4.2862)	-	-0.44199 (-1.9438)	-	-	0.28690	119					
EXPRET	0.13450 (10.679)	0.07671 (3.2239)	0.66225 (3.0369)	0.86144 (4.0823)	-0.66497 (-3.0198)	-	-	0.37240	119					
EXPRET	0.14008 (10.647)	0.03318 (2.2479)	-	-	-	0.07564 (4.3851)	-	0.28190	119					
EXPRET	0.14380 (10.901)	0.02912 (1.9705)	-	-	-	-	0.06840 (4.7401)	0.29870	119					
CRRET1	-0.02647 (-4.9542)	0.03781 (6.7656)	-	-	-	-	-	0.27510	119					
CRRET1	-0.01708 (-4.7136)	-	-	-	0.37079 (7.4423)	-	-	0.31550	119					
CRRET1	-0.02145 (-3.9127)	0.01143 (1.0620)	-	-	0.28020 (2.8366)	-	-	0.31620	119					

Numbers in parantheses are T - Values)

(Numbers in parentheses are T - Values)

Results from Cross - Sectional Regressions

Dependent Variable	Analysts		UNSTARRED		Independent Variables						Month		1981
	INTERCEPT	BETA	DIVOP	CRR11	CRSTD1	CRR1A	CRR1G	Adjusted R-Square	Cases				
EXPRET	0.15704 (27.560)	0.02671 (4.7367)	-	-	-	-	-	0.06650	302				
EXPRET	0.16285 (66.947)	-	0.74654 (9.2145)	-	-	-	-	0.21800	302				
EXPRET	0.17084 (42.694)	-	-	-	0.16278 (3.2988)	-	-	0.03180	302				
EXPRET	0.18373 (122.74)	-	-	-0.01098 (-1.1497)	-	-	-	-0.00330	302				
EXPRET	0.15518 (29.812)	0.00934 (1.6657)	0.68849 (7.8257)	-	-	-	-	0.22260	302				
EXPRET	0.15261 (24.629)	0.04573 (3.7972)	-	-	-0.18473 (-1.7854)	-	-	0.07320	302				
EXPRET	0.14954 (26.516)	0.03302 (2.9885)	0.70247 (8.0363)	-	-0.23352 (-2.4801)	-	-	0.23580	302				
EXPRET	0.14282 (24.653)	0.03738 (3.4390)	0.71984 (8.4064)	-0.38184 (-3.7975)	-0.15439 (-1.6349)	-	-	0.26870	302				
EXPRET	0.14887 (24.358)	0.03904 (5.8637)	-	-	-	-0.03032 (-3.3464)	-	0.09720	302				
EXPRET	0.14939 (24.145)	0.03777 (5.6393)	-	-	-	-	-0.02188 (-2.9699)	0.09020	302				
CRR11	-0.02244 (-7.5416)	0.03390 (11.511)	-	-	-	-	-	0.30400	302				
CRR11	-0.01251 (-6.2166)	-	-	-	0.30340 (12.223)	-	-	0.33020	302				
CRR11	-0.01739 (-5.4868)	0.01224 (1.9865)	-	-	0.21038 (3.9740)	-	-	0.33670	302				

(Numbers in parentheses are t - Values)

Results from Jones - Correlation Regression

Dependent Variable	Intercept	BETA	Independent Variables					Adjusted R-Square	Cases
			DIVOP	CRRET1	CRSTD1	CRR1A	CRR16		
EXPRT	0.11977 (21.153)	0.06338 (11.236)	-	-	-	-	-	0.23980	398
EXPRT	0.16796 (82.292)	-	0.55139 (8.1554)	-	-	-	-	0.14160	398
EXPRT	0.15275 (40.222)	-	-	-	0.36808 (8.1203)	-	-	0.14060	398
EXPRT	0.17619 (104.91)	-	-	0.51403 (4.7994)	-	-	-	0.05260	398
EXPRT	0.11891 (21.919)	0.05401 (9.6105)	0.38358 (6.0505)	-	-	-	-	0.30250	398
EXPRT	0.11246 (17.710)	0.08847 (7.6505)	-	-	-0.21676 (-2.4802)	-	-	0.24960	398
EXPRT	0.10679 (17.644)	0.09364 (8.5540)	0.44622 (6.9847)	-	-0.35558 (-4.1881)	-	-	0.33060	398
EXPRT	0.10756 (17.616)	0.09339 (8.5278)	0.44738 (7.0010)	0.10201 (.96400)	-0.37798 (-4.2937)	-	-	0.33050	398
EXPRT	0.11992 (20.328)	0.06309 (9.8647)	-	-	-	0.00086 (.09514)	-	0.23790	399
EXPRT	0.12077 (20.302)	0.06167 (9.5922)	-	-	-	-	0.00415 (.55641)	0.23850	398
CRRET1	-0.01501 (-5.7309)	0.02760 (10.578)	-	-	-	-	-	0.21830	398
CRRET1	-0.00654 (-4.1096)	-	-	-	0.23317 (12.267)	-	-	0.27350	398
CRRET1	-0.00773 (-2.7087)	0.00260 (.4961)	-	-	0.21602 (5.5024)	-	-	0.27210	398

(Numbers in parantheses are T - Values)

TABLE - B 7 (b)

Results from Cross - Sectional Regressions

Dependent Variable	Analysts		Independent Variables	Month		Adjusted R-Square	Cases
	.....	STARRED		.....	April 1982		
	INTERCEPT	BETA	DIVOP	CRRET1	CRSTD1	CRR1A	CRR1G
EXPRET	0.08138 (5.7212)	0.10997 (7.3583)	-	-	-	-	-
EXPRET	0.16629 (37.076)	-	0.98471 (4.8144)	-	-	-	-
EXPRET	0.13590 (14.337)	-	-	0.68239 (5.3247)	-	-	-
EXPRET	0.16645 (50.471)	-	-	1.62480 (7.1516)	-	-	-
EXPRET	0.08768 (6.2334)	0.09286 (5.8222)	0.51744 (2.6300)	-	-	-	-
EXPRET	0.06844 (4.1524)	0.15294 (4.8090)	-	-0.38277 (-1.5280)	-	-	-
EXPRET	0.07261 (4.5270)	0.14320 (4.6182)	0.55858 (2.8539)	-	-0.46050 (-1.8852)	-	-
EXPRET	0.08708 (5.8163)	0.13538 (4.7694)	0.45843 (2.5451)	1.14440 (4.7430)	-0.71450 (-3.1122)	-	-
EXPRET	0.10356 (7.2772)	0.07378 (4.5243)	-	-	-	0.08709 (4.2544)	-
EXPRET	0.10729 (7.4834)	0.07024 (4.2881)	-	-	-	0.07584 (4.5012)	-
CRRET1	-0.02122 (-4.1472)	0.03463 (6.4426)	-	-	-	-	-
CRRET1	-0.00962 (-3.1601)	-	-	-	0.29230 (7.1024)	-	-
CRRET1	-0.01330 (-2.2905)	0.00835 (0.7454)	-	-	0.23412 (2.6521)	-	-

(Numbers in parentheses are T - Values)

TABLE - B 7 (c)

Results from Cross - Sectional Regressions

Dependent Variable	Analysts		Independent Variables	Month		Adjusted R-Square	Cases
	.....	UNSTARRED		.....	April 1982		
	INTERCEPT	BETA	DIVOP	CRRET1	CRSTD1	CRR1A	CRR1G
EXPRET	0.12151 (18.429)	0.06158 (9.3521)	-	-	-	-	-
EXPRET	0.16570 (60.897)	-	0.65984 (6.7389)	-	-	-	-
EXPRET	0.15190 (35.243)	-	-	-	0.38242 (7.3176)	-	-
EXPRET	0.17995 (93.166)	-	-	0.20163 (1.5950)	-	-	-
EXPRET	0.12106 (18.903)	0.05151 (7.5657)	0.41221 (4.3166)	-	-	-	-
EXPRET	0.11493 (14.786)	0.08249 (5.5992)	-	-	-0.17696 (-1.5856)	-	-
EXPRET	0.10730 (14.134)	0.09240 (6.4859)	0.51693 (5.2039)	-	-0.36768 (-3.2522)	-	-
EXPRET	0.10428 (13.723)	0.09487 (6.7143)	0.50195 (5.0972)	-0.32655 (-2.6633)	-0.30724 (-2.6911)	-	-
EXPRET	0.11524 (16.929)	0.07256 (9.8090)	-	-	-	-0.03228 (-3.0940)	-
EXPRET	0.11555 (16.748)	0.07129 (9.5433)	-	-	-	-0.02290 (-2.6596)	-
CRRET1	-0.01617 (-5.3427)	0.02833 (9.3714)	-	-	-	-	-
CRRET1	-0.00614 (-3.3005)	-	-	-	0.22555 (10.005)	-	-
CRRET1	-0.00993 (-2.8222)	0.00846 (1.2693)	-	-	0.16815 (3.3285)	-	-

(Numbers in parentheses are T - Values)

Results from Cross - Sectional Regressions

Dependent Variable	Analysts		ALL		Month		October		1982	
	INTERCEPT	BETA	DIVOP	CRRET1	CRSTD1	CRR1A	CRR1G	R-Square	Cases	
Independent Variables										
EXPRET	0.11393 (14.890)	0.05229 (6.8493)	-	-	-	-	-	0.10730	383	
EXPRET	0.15122 (76.513)	-	0.57424 (8.5392)	-	-	-	-	0.15840	383	
EXPRET	0.15081 (36.968)	-	-	-	0.17971 (3.8234)	-	-	0.03440	383	
EXPRET	0.16281 (85.525)	-	-	0.22669 (11.9461)	-	-	-	0.00720	383	
EXPRET	0.11529 (16.031)	0.03848 (5.1824)	0.48387 (7.1822)	-	-	-	-	0.21190	383	
EXPRET	0.09800 (10.991)	0.09176 (6.5747)	-	-	-0.27755 (-3.3595)	-	-	0.13080	383	
EXPRET	0.09584 (11.553)	0.08600 (6.6161)	0.51431 (7.7739)	-	-0.34028 (-4.4049)	-	-	0.24830	383	
EXPRET	0.09592 (11.569)	0.08605 (6.6235)	0.52205 (7.8589)	0.13651 (1.2082)	-0.36614 (-4.5701)	-	-	0.24920	383	
EXPRET	0.11332 (14.574)	0.05364 (6.5436)	-	-	-	-0.00449 (-4.5476)	-	0.10540	383	
EXPRET	0.11364 (14.548)	0.05286 (6.4358)	-	-	-	-	-0.00154 (-1.19142)	0.10500	383	
CRRET1	-0.01128 (-3.4076)	0.02499 (7.5704)	-	-	-	-	-	0.12850	383	
CRRET1	-0.00135 (-82423)	-	-	-	0.17772 (9.4124)	-	-	0.18650	383	
CRRET1	-0.00080 (-21140)	-0.00096 (-16199)	-	-	0.18249 (5.2105)	-	-	0.18440	383	

(Numbers in parantheses are T - Values)

Results from Cross - Sectional Regressions

Dependent Variable	Analysts		STARRED		Month		October		1982	
	INTERCEPT	BETA	DIVOP	CRRET1	CRSTD1	CRR1A	CRR1G	R-Square	Cases	
Independent Variables										
EXPRET	0.08468 (4.2348)	0.09027 (4.3418)	-	-	-	-	-	0.14530	106	
EXPRET	0.15038 (31.004)	-	0.98633 (4.7668)	-	-	-	-	0.17140	106	
EXPRET	0.13234 (12.952)	-	-	-	0.52206 (3.8761)	-	-	0.11780	106	
EXPRET	0.15362 (38.854)	-	-	1.38880 (5.2478)	-	-	-	0.20180	106	
EXPRET	0.09515 (4.9493)	0.06289 (2.9620)	0.75258 (3.5064)	-	-	-	-	0.22900	106	
EXPRET	0.08943 (3.5291)	0.07882 (1.8464)	-	-	0.08371 (0.3075)	-	-	0.13780	106	
EXPRET	0.09500 (3.9365)	0.06324 (1.5498)	0.75279 (3.4743)	-	-0.00264 (-0.01016)	-	-	0.22150	106	
EXPRET	0.09726 (4.3480)	0.06767 (1.7888)	0.75529 (3.7620)	1.15240 (4.2188)	-0.28548 (-1.1422)	-	-	0.33160	106	
EXPRET	0.10198 (5.2939)	0.05792 (2.7352)	-	-	-	0.09090 (3.9108)	-	0.24860	106	
EXPRET	0.10618 (5.5345)	0.05357 (2.5418)	-	-	-	-	0.08196 (4.2787)	0.26720	106	
CRRET1	-0.01586 (-2.4066)	0.02965 (4.3271)	-	-	-	-	-	0.14440	106	
CRRET1	-0.00406 (-1.2698)	-	-	-	0.22360 (5.3105)	-	-	0.20580	106	
CRRET1	-0.00194 (-0.2413)	-0.00388 (-0.2864)	-	-	0.24519 (2.8361)	-	-	0.19870	106	

(Numbers in parantheses are T - Values)

TABLE - B 13 (c)

Results from Cross - Sectional Regressions

Dependent Variable	Analysts		UNSTARRED		Month		October		1982	
	INTERCEPT	BETA	DIVOP	CRR1A	CRR1B	CRR1C	Adjusted R-Square	Cases		
EXPRET	0.10276 (11.653)	0.06389 (7.2416)	-	-	-	-	0.16410	263		
EXPRET	0.14090 (54.919)	-	1.09000 (10.799)	-	-	-	0.30620	263		
EXPRET	0.13944 (30.203)	-	-	0.32359 (5.9743)	-	-	0.11690	263		
EXPRET	0.16869 (75.780)	-	-	-0.20459 (-1.4635)	-	-	0.00430	263		
EXPRET	0.10749 (13.839)	0.03768 (4.5390)	0.92090 (8.8350)	-	-	-	0.35460	263		
EXPRET	0.10153 (9.3504)	0.06682 (3.8362)	-	-0.02031 (-0.1952)	-	-	0.16100	263		
EXPRET	0.10136 (10.648)	0.05206 (3.3896)	0.93256 (8.9061)	-0.10201 (-1.1129)	-	-	0.35520	263		
EXPRET	0.10029 (10.706)	0.05387 (3.5641)	0.83064 (7.6910)	-0.40757 (-3.1299)	-0.01801 (-0.1915)	-	0.37640	263		
EXPRET	0.09344 (10.827)	0.08210 (8.9506)	-	-	-0.05608 (-5.0531)	-	0.23590	263		
EXPRET	0.09780 (10.636)	0.08153 (8.8171)	-	-	-	-0.04327 (-4.7726)	0.22850	263		
CRR1I	-0.01384 (-3.5328)	0.02706 (6.9029)	-	-	-	-	0.15110	263		
CRR1I	-0.00729 (-1.2356)	-	-	0.18672 (8.2287)	-	-	0.20290	263		
CRR1I	-0.00267 (-0.5707)	0.00049 (0.0653)	-	-	0.18419 (4.1113)	-	0.19990	263		

(Numbers in parentheses are T - Values)

TABLE - B 19 (a)

Results from Cross - Sectional Regressions

Dependent Variable	Analysts		ALL		Month		April		1983	
	INTERCEPT	BETA	DIVOP	CRR1A	CRR1B	CRR1C	Adjusted R-Square	Cases		
EXPRET	0.13946 (21.018)	0.01375 (2.0754)	-	-	-	-	0.00910	360		
EXPRET	0.14250 (83.564)	-	0.44968 (7.4396)	-	-	-	0.13150	360		
EXPRET	0.15087 (38.704)	-	-	0.02578 (.58670)	-	-	-0.00180	360		
EXPRET	0.14739 (61.147)	-	-	0.30751 (2.5961)	-	-	0.01570	360		
EXPRET	0.13767 (22.132)	0.00511 (.80801)	0.44015 (7.1441)	-	-	-	0.13060	360		
EXPRET	0.13171 (17.681)	0.03759 (3.0046)	-	-0.18492 (-2.2414)	-	-	0.02010	360		
EXPRET	0.12805 (18.401)	0.03425 (2.9356)	0.45381 (7.4241)	-	-0.22815 (-2.9592)	-	0.14910	360		
EXPRET	0.12787 (18.450)	0.03335 (2.8687)	0.44184 (7.2240)	0.25336 (2.0033)	-0.26708 (-3.3723)	-	0.15630	360		
EXPRET	0.14083 (21.170)	0.00776 (1.0580)	-	-	0.02058 (1.8772)	-	0.01610	360		
EXPRET	0.14188 (21.232)	0.00644 (.87792)	-	-	-	0.01913 (2.2735)	0.02050	360		
CRR1I	-0.00552 (-2.0781)	0.02427 (9.1472)	-	-	-	-	0.18720	360		
CRR1I	0.00309 (2.0534)	-	-	0.17993 (10.616)	-	-	0.23730	360		
CRR1I	0.00111 (.38063)	0.00389 (.79635)	-	-	0.15814 (4.9123)	-	0.23650	360		

(Numbers in parentheses are T - Values)

TABLE - B 19 (b)

Results from Cross - Sectional Regressions

Dependent Variable	Analysts		STARRED	Independent Variables					Adjusted R-Square	Cases
	.....			Month						
	INTERCEPT	BETA		DIVOP	CRR11	CRSTD1	CRR1G			
EXPRET	0.08706 (4.9125)	0.08310 (4.4780)	-	-	-	-	-	-	0.16000	101
EXPRET	0.15271 (27.560)	-	0.62540 (2.6328)	-	-	-	-	-	0.05600	101
EXPRET	0.11979 (11.546)	-	-	-	0.60618 (4.5458)	-	-	-	0.16430	101
EXPRET	0.12749 (26.283)	-	-	2.12420 (8.6240)	-	-	-	-	0.42320	101
EXPRET	0.08866 (5.0176)	0.07409 (3.7936)	0.33392 (1.4160)	-	-	-	-	-	0.16850	101
EXPRET	0.10081 (4.8741)	0.04046 (1.0606)	-	-	0.35129 (1.2783)	-	-	-	0.16540	101
EXPRET	0.10230 (4.9646)	0.03180 (0.8273)	0.33196 (1.4122)	-	0.34877 (1.2756)	-	-	-	0.17380	101
EXPRET	0.11266 (6.7569)	0.00432 (0.1384)	0.55604 (2.8963)	2.06120 (7.2966)	0.00440 (0.0195)	-	-	-	0.46300	101
EXPRET	0.10847 (7.2537)	0.02364 (1.3443)	-	-	-	0.16151 (6.8809)	-	-	0.42790	101
EXPRET	0.11588 (7.8059)	0.01953 (1.1279)	-	-	-	-	0.12850 (7.3300)	-	0.45190	101
CRR11	-0.01105 (-2.1165)	0.03068 (5.6140)	-	-	-	-	-	-	0.23380	101
CRR11	0.00039 (0.1286)	-	-	-	0.23239 (6.0044)	-	-	-	0.25950	101
CRR11	-0.00454 (-0.7552)	0.01050 (0.9473)	-	-	0.16624 (2.0819)	-	-	-	0.25880	101

(Numbers in parentheses are T - Values)

TABLE - B 19 (c)

Results from Cross - Sectional Regressions

Analysts		.....		UNSTARRED		Independent Variables				Month		.....		April		1983	
Dependent Variable	INTERCEPT	BETA	DIVOP	CRR11	CRSTD1	CRR1A	CRR1B	Adjusted R-Square	Cases								
EXPRET	0.14733 (21.801)	0.00176 (0.2569)	-	-	-	-	-	-0.00400	237								
EXPRET	0.14577 (64.493)	-	0.17452 1.6191	-	-	-	-	0.00680	237								
EXPRET	0.15079 (38.381)	-	-	-	-0.02118 (-0.4597)	-	-	-0.00340	237								
EXPRET	0.15348 (65.817)	-	-	-0.24985 (-2.1075)	-	-	-	0.01440	237								
EXPRET	0.14686 (21.783)	-0.00122 (-0.1717)	0.18161 (1.6043)	-	-	-	-	0.00270	237								
EXPRET	0.14284 (18.774)	0.01577 (1.2200)	-	-	-0.11091 (-1.2783)	-	-	-0.00130	237								
EXPRET	0.14130 (18.551)	0.01544 (1.2007)	0.20887 (1.8285)	-	-0.13549 (-1.5507)	-	-	0.00870	237								
EXPRET	0.14222 (18.748)	0.01535 (1.2006)	0.18392 (1.6097)	-0.26518 (-1.9558)	-0.08274 (-0.9099)	-	-	0.02050	237								
EXPRET	0.14581 (21.705)	0.00904 (1.2171)	-	-	-	-0.02614 (-2.4217)	-	0.01640	237								
EXPRET	0.14536 (21.452)	0.00809 (1.0840)	-	-	-	-	-0.01737 (-2.0861)	0.01010	237								
CRR11	-0.00482 (-1.4317)	0.02322 (6.7821)	-	-	-	-	-	0.16010	237								
CRR11	0.00253 (1.3450)	-	-	-	0.18499 (8.3922)	-	-	0.22730	237								
CRR11	0.00278 (0.7615)	-0.00050 (-0.0808)	-	-	0.18784 (4.5114)	-	-	0.22400	237								

(Numbers in parentheses are T - Values)

TABLE - B 25 (b)

Results from Cross - Sectional Regressions

Analysts			.....		STARRED		Month		.....		October		1983	
Dependent Variable	Independent				Variables				Adjusted		R-Square		Cases	
	INTERCEPT	BETA	DIVOP	CRR1I	CRSD1	CRR1A	CRR1B							
EXPRET	0.08584 (4.0060)	0.08176 (3.6331)	-	-	-	-	-	-	-	-	-	-	0.12810	84
EXPRET	0.14428 (26.081)	-	0.84510 (3.8913)	-	-	-	-	-	-	-	-	-	0.14560	84
EXPRET	0.12113 (10.693)	-	-	-	0.54650 (3.8121)	-	-	-	-	-	-	-	0.14020	84
EXPRET	0.12453 (23.709)	-	-	2.41000 (8.0755)	-	-	-	-	-	-	-	-	0.43620	84
EXPRET	0.10104 (4.6526)	0.05160 (2.0561)	0.59766 (2.4428)	-	-	-	-	-	-	-	-	-	0.17790	84
EXPRET	0.10722 (3.8516)	0.02760 (0.5471)	-	-	0.38793 (1.1988)	-	-	-	-	-	-	-	0.13280	84
EXPRET	0.10998 (4.0357)	0.02840 (0.5758)	0.55713 (2.1707)	-	0.18085 (0.5472)	-	-	-	-	-	-	-	0.17080	84
EXPRET	0.12423 (5.6196)	-0.01410 (-0.3496)	0.44404 (2.1358)	2.18150 (6.6140)	0.09663 (0.3617)	-	-	-	-	-	-	-	0.45950	84
EXPRET	0.10843 (6.1747)	0.01952 (0.9611)	-	-	-	0.18867 (6.7590)	-	-	-	-	-	-	0.43570	84
EXPRET	0.11484 (6.6825)	0.01557 (0.7881)	-	-	-	-	0.15661 (7.3226)	-	-	-	-	-	0.46890	84
CRR1I	-0.00998 (-1.7556)	0.02749 (4.6054)	-	-	-	-	-	-	-	-	-	-	0.19580	84
CRR1I	0.00299 (0.9783)	-	-	-	0.16938 (4.3801)	-	-	-	-	-	-	-	0.17970	84
CRR1I	-0.00679 (-0.9136)	0.01941 (1.4419)	-	-	0.05788 (0.6702)	-	-	-	-	-	-	-	0.19040	84

(Numbers in parentheses are T - Values)

TABLE - B 25 (a)

Results from Cross - Sectional Regressions

Dependent Variable	Analysts	.....	ALL	Independent Variables					Adjusted R-Square	Cases
				INTERCEPT	BETA	DIVOP	CRR1A	CRR1B		
EXPRET	0.13049 (20.410)	0.02104 (3.2783)	-	-	-	-	-	-	0.02740	347
EXPRET	0.14227 (66.121)	-	0.38842 (4.6017)	-	-	-	-	-	0.05510	347
EXPRET	0.14290 (39.886)	-	-	-	0.09621 (2.4056)	-	-	-	0.01360	347
EXPRET	0.14174 (66.002)	-	-	0.56161 (4.8837)	-	-	-	-	0.06190	347
EXPRET	0.13230 (20.984)	0.01151 (1.6825)	0.32907 (3.6053)	-	-	-	-	-	0.06010	347
EXPRET	0.12769 (17.145)	0.02882 (2.3260)	-	-	-0.05625 (-73387)	-	-	-	0.02610	347
EXPRET	0.12479 (17.049)	0.03155 (2.5990)	0.38933 (4.0651)	-	-0.15759 (-1.9944)	-	-	-	0.06820	347
EXPRET	0.12515 (17.397)	0.02702 (2.2533)	0.34620 (3.6494)	0.45425 (3.6302)	-0.18739 (-2.3999)	-	-	-	0.10010	347
EXPRET	0.13271 (21.090)	0.01047 (1.5265)	-	-	-	-	0.04048 (3.8841)	-	0.06560	347
EXPRET	0.13408 (21.298)	0.00922 (1.3457)	-	-	-	-	-	0.03540 (4.2713)	0.07370	347
CRR1I	-0.00458 (-1.6968)	0.02178 (8.0398)	-	-	-	-	-	-	0.15540	347
CRR1I	0.00482 (3.2340)	-	-	-	0.13949 (8.3803)	-	-	-	0.16670	347
CRR1I	-0.00008 (-0.02704)	0.00929 (1.7965)	-	-	0.09033 (2.8226)	-	-	-	0.17210	347

(Numbers in parentheses are T - Values)

Individual Analysts' Risk Return Regressions

Results from Cross - Sectional Regressions

Dependent Variable	Analysts		..... UNSTARRED		Month		..... October		1983	
	INTERCEPT	BETA	DIVOP	CRR1	CRR2	CRR3	CRR4	CRR5	CRR6	CRR7
Independent Variables										
Adjusted R-Square										
Cases										
EXPRT	0.13770 (19.605)	0.01331 (1.8551)	-	-	-	-	-	-	0.01070	226
EXPRT	0.14037 (69.355)	-	0.54111 (5.7175)	-	-	-	-	-	0.12350	226
EXPRT	0.14152 (36.415)	-	-	-	0.10950 (2.4168)	-	-	-	0.02110	226
EXPRT	0.15061 (64.792)	-	-	-	-	-	-	-	-0.00450	226
EXPRT	0.13645 (20.597)	0.00433 (0.6222)	0.52661 (5.3957)	-	-	-	-	-	0.12100	226
EXPRT	0.14409 (17.811)	-0.00494 (-0.3628)	-	-	0.13615 (1.5766)	-	-	-	0.01730	226
EXPRT	0.13754 (17.696)	0.00139 (0.1070)	0.51948 (5.1282)	-	0.02290 (0.2702)	-	-	-	0.11740	226
EXPRT	0.13737 (17.695)	0.00266 (0.2049)	0.51928 (5.1332)	-0.17244 (-1.2700)	0.04391 (0.5091)	-	-	-	0.11980	226
EXPRT	0.13888 (19.302)	0.01622 (2.0481)	-	-	-	-0.01024 (-0.8701)	-	-	0.00970	226
EXPRT	0.13694 (19.156)	0.01537 (1.9296)	-	-	-	-	-	-0.00563 (-0.5989)	0.00790	226
CRR1	-0.00672 (-2.0197)	0.02369 (6.9693)	-	-	-	-	-	-	0.17450	226
CRR1	0.00284 (1.5623)	-	-	-	0.16147 (7.6144)	-	-	-	0.20210	226
CRR1	-0.00101 (-0.2675)	0.00739 (1.1637)	-	-	0.12157 (3.0161)	-	-	-	0.20330	226

(Numbers in parentheses are T - Values)

TABLE - C.1

OCTOBER 1981

TABLE - C.7

APRIL 1982

ANALYST	INTERCEPT	BETA	R-SQUARE	INTERCEPT	CRSTD1	R-SQUARE	CASES	ANALYST	INTERCEPT	BETA	R-SQUARE	INTERCEPT	CRSTD1	R-SQUARE	CASES
B11	0.13906 (8.191)	0.09268 (5.620)	0.1836	0.16342 (13.838)	0.84557 (6.101)	0.2103	137	B11	0.04929 (2.721)	0.15707 (9.016)	0.3712	0.10344 (9.239)	1.28060 (9.925)	0.4176	137
RB1*	0.14467 (12.426)	0.03375 (2.010)	0.0155	0.15807 (19.557)	0.12842 (1.233)	0.0027	194	RB1*	0.12064 (8.625)	0.06129 (4.205)	0.0933	0.14906 (17.093)	0.40116 (3.519)	0.0657	163
RB2	0.15817 (26.077)	0.03481 (5.667)	0.1446	0.17269 (38.724)	0.25625 (4.467)	0.0934	185	RB2	0.11084 (13.237)	0.08903 (10.348)	0.3787	0.15030 (25.667)	0.40925 (8.119)	0.2717	175
MB1	0.16214 (18.501)	0.02059 (2.421)	0.0159	0.16886 (27.541)	0.17343 (2.390)	0.0154	302	MB1	0.15338 (10.117)	0.03132 (2.101)	0.0118	0.17258 (17.718)	0.14743 (1.298)	0.0024	287
RB3*	0.12605 (10.974)	0.04252 (3.680)	0.0579	0.14608 (18.619)	0.27946 (2.850)	0.0337	205	RB3*	0.09159 (6.863)	0.08021 (5.934)	0.1554	0.13492 (15.894)	0.44667 (4.258)	0.0843	187
RB4	0.14887 (16.939)	0.01963 (2.212)	0.0235	0.16361 (28.863)	0.05827 (0.810)	-0.0021	163	RB4	0.11576 (10.553)	0.06086 (5.432)	0.1504	0.14842 (22.624)	0.34137 (4.143)	0.0913	162
RB5*	0.11801 (5.692)	0.08430 (3.980)	0.1402	0.14472 (9.707)	0.74337 (3.772)	0.1269	92	RB5*	0.07974 (3.131)	0.13187 (5.080)	0.2259	0.13659 (8.245)	0.94769 (4.423)	0.1793	86
MB2	0.21305 (13.022)	-0.00523 (-0.322)	-0.0031	0.23266 (20.832)	-0.31638 (-2.295)	0.0144	294	MB2	0.14304 (8.681)	0.04758 (2.870)	0.0239	0.18289 (17.734)	0.08592 (0.686)	-0.0018	296
B12*	0.15397 (13.025)	0.01887 (1.408)	0.0054	0.17082 (20.213)	-0.00531 (-0.049)	-0.0055	183	B12*	0.14913 (9.150)	0.02671 (1.571)	0.0087	0.17887 (17.744)	-0.05813 (-0.440)	-0.0049	168
MB3	0.14634 (16.705)	0.01095 (1.239)	0.0028	0.15478 (26.070)	0.02896 (0.389)	-0.0045	191	MB3	0.12045 (12.741)	0.03555 (3.709)	0.0679	0.13931 (23.804)	0.20189 (2.795)	0.0375	176
RB6*	0.11481 (9.684)	0.06715 (5.488)	0.1386	0.14631 (15.948)	0.44499 (3.651)	0.0638	182	RB6*	0.09211 (6.630)	0.09466 (6.540)	0.1875	0.14093 (14.444)	0.55477 (4.315)	0.0887	182
B13	0.16917 (25.147)	0.01002 (1.491)	0.0057	0.18086 (39.678)	-0.02300 (-0.406)	-0.0039	216	B13	0.15012 (20.627)	0.02002 (2.733)	0.0295	0.17019 (38.267)	-0.00513 (-0.095)	-0.0047	214
RB7	0.16417 (22.904)	-0.00415 (-0.567)	-0.0031	0.16493 (32.055)	-0.06405 (-0.954)	-0.0004	224	RB7	0.13002 (18.798)	0.03156 (4.443)	0.0795	0.14458 (31.263)	0.20927 (3.517)	0.0498	218
B14	0.14510 (20.443)	0.02454 (3.492)	0.0301	0.16003 (32.115)	0.11953 (1.964)	0.0079	362	B14	0.11276 (12.264)	0.06801 (7.394)	0.1288	0.15249 (25.136)	0.34111 (4.666)	0.0541	364
B15	0.11451 (6.403)	0.09237 (5.259)	0.1098	0.15726 (12.765)	0.62987 (4.182)	0.0709	217	B15	0.14936 (7.592)	0.05949 (3.039)	0.0388	0.16720 (13.864)	0.51054 (3.523)	0.0530	205
RB8	0.14592 (13.504)	0.02295 (2.128)	0.0225	0.15806 (20.345)	0.13620 (1.395)	0.0061	154	RB8	0.11601 (8.271)	0.06404 (4.542)	0.1178	0.14657 (16.063)	0.41281 (3.664)	0.0779	148
MB4*	0.13237 (9.975)	0.05204 (3.943)	0.0684	0.15951 (17.287)	0.31394 (2.732)	0.0316	199	MB4*	0.12128 (7.697)	0.06720 (4.238)	0.0785	0.16588 (16.837)	0.27270 (2.244)	0.0199	200
1A1*	0.12415 (15.049)	0.05712 (7.027)	0.1081	0.14974 (25.451)	0.39352 (5.529)	0.0690	400	1A1*	0.10946 (11.779)	0.07288 (7.871)	0.1320	0.14818 (24.591)	0.41227 (5.749)	0.0740	402
MB5	0.16537 (21.173)	0.01961 (2.494)	0.0203	0.17185 (31.508)	0.16568 (2.405)	0.0186	253	MB5	0.14176 (17.031)	0.04478 (5.289)	0.0957	0.16334 (31.042)	0.28027 (4.301)	0.0642	256

TABLE - C.13

OCTOBER 1982

ANALYST	INTERCEPT	BETA	R-SQUARE	INTERCEPT	CRST01	R-SQUARE	CASES
B11	0.02355 (1.406)	0.15333 (9.327)	0.3963	0.10124 (11.106)	0.88214 (8.786)	0.3677	132
RB1*	0.13678 (7.010)	0.03387 (1.689)	0.0112	0.15533 (15.663)	0.18393 (1.473)	0.0071	164
RB2	0.15609 (24.739)	-0.00271 (-0.423)	-0.0046	0.15269 (46.355)	0.00938 (0.232)	-0.0053	180
MB1	0.13779 (7.023)	0.03316 (1.710)	0.0069	0.16016 (15.564)	0.12692 (1.094)	0.0007	276
RB3*	0.05442 (3.214)	0.11061 (6.472)	0.1834	0.11882 (13.670)	0.55223 (5.284)	0.1288	183
RB4	0.12007 (12.052)	0.03090 (3.048)	0.0502	0.14113 (28.929)	0.11492 (1.922)	0.0169	158
RB5*	0.06657 (2.031)	0.13280 (3.973)	0.1611	0.13169 (7.837)	0.83716 (3.934)	0.1583	78
MB2	0.14043 (6.751)	0.03913 (1.879)	0.0084	0.17346 (16.489)	0.06896 (0.563)	-0.0023	301
B12*	0.16272 (6.812)	-0.00038 (-0.015)	-0.0066	0.17125 (13.589)	-0.11461 (-0.719)	-0.0032	153
MB3	0.09565 (8.159)	0.05332 (4.509)	0.1038	0.12759 (21.570)	0.25272 (3.598)	0.0667	168
RB6*	0.06815 (4.106)	0.10484 (6.110)	0.1672	0.13123 (14.413)	0.49164 (4.247)	0.0860	182
B13	0.15347 (17.640)	0.00377 (0.431)	-0.0037	0.16227 (37.108)	-0.06246 (-1.201)	0.0020	224
RB7	0.10849 (13.973)	0.03493 (4.421)	0.0777	0.12680 (31.288)	0.19935 (4.000)	0.0638	221
B14	0.07532 (6.321)	0.10085 (8.472)	0.1628	0.14054 (21.853)	0.41832 (5.607)	0.0772	365
B15	-	-	-	-	-	-	-
RB8	0.10742 (5.854)	0.05580 (3.024)	0.0518	0.14561 (15.409)	0.20601 (1.844)	0.0159	150
MB4*	0.13279 (7.306)	0.04196 (2.296)	0.0211	0.17624 (19.084)	-0.02504 (-0.228)	-0.0048	199
IA1*	0.14181 (11.162)	0.01100 (0.869)	-0.0006	0.15679 (24.076)	-0.04777 (-0.642)	-0.0015	407
MB5	0.09489 (7.831)	0.08962 (7.328)	0.1702	0.14473 (23.258)	0.46881 (6.354)	0.1328	258

TABLE - C.19

APRIL 1983

ANALYST	INTERCEPT	BETA	R-SQUARE	INTERCEPT	CRST01	R-SQUARE	CASES
B11	-	-	-	-	-	-	-
RB1*	0.11124 (6.628)	0.05851 (3.346)	0.0613	0.13972 (14.825)	0.34417 (2.976)	0.0479	157
RB2	0.16010 (34.030)	-0.01499 (-3.138)	0.0486	0.15126 (53.484)	-0.07045 (-2.102)	0.0194	174
MB1	0.18896 (11.780)	-0.03451 (-2.186)	0.0128	0.17420 (18.718)	-0.22468 (-2.215)	0.0133	292
RB3*	0.06874 (4.330)	0.09119 (5.674)	0.1477	0.11064 (12.136)	0.57180 (5.370)	0.1339	181
RB4	0.13521 (14.776)	0.00918 (0.981)	-0.0002	0.13823 (27.372)	0.07220 (1.200)	0.0028	156
RB5*	0.10089 (3.375)	0.09302 (3.015)	0.1063	0.13815 (7.675)	0.66715 (2.975)	0.1035	69
MB2	0.14631 (8.221)	0.00669 (0.375)	-0.0029	0.15246 (14.793)	0.00525 (0.045)	-0.0034	294
B12*	0.17334 (8.815)	-0.02215 (-1.092)	0.0012	0.18081 (16.161)	-0.35446 (-2.633)	0.0366	157
MB3	0.12294 (13.766)	0.00783 (0.868)	-0.0015	0.12769 (25.241)	0.03479 (0.597)	-0.0040	162
RB6*	0.10250 (7.300)	0.06211 (4.258)	0.0882	0.13772 (15.957)	0.30346 (2.856)	0.0389	178
B13	0.15011 (20.009)	0.00044 (0.059)	-0.0045	0.15604 (35.575)	-0.06470 (-1.293)	0.0030	222
RB7	0.12602 (20.154)	0.01366 (2.141)	0.0167	0.13182 (35.760)	0.09120 (2.083)	0.0156	212
B14	0.11014 (11.129)	0.04680 (4.725)	0.0570	0.14019 (23.653)	0.18847 (2.824)	0.0194	354
B15	-	-	-	-	-	-	-
RB8	0.12368 (8.445)	0.02123 (1.447)	0.0073	0.14007 (16.423)	0.05362 (0.554)	-0.0047	150
MB4*	0.13966 (8.302)	0.03178 (1.883)	0.0131	0.16960 (17.193)	0.01679 (0.148)	-0.0051	192
IA1*	0.14571 (11.828)	-0.00279 (-0.228)	-0.0023	0.14581 (20.357)	-0.03302 (-0.417)	-0.0020	406
MB5	0.16361 (20.762)	-0.00449 (-0.562)	-0.0029	0.16089 (35.675)	-0.01988 (-0.379)	-0.0036	241

ANALYST	INTERCEPT	BETA	R-SQUARE	INTERCEPT	CRSTD1	R-SQUARE	CASES
P11	-	-	-	-	-	-	-
R81*	0.12119 (6.648)	0.04404 (2.3243)	0.0274	0.14208 (14.798)	0.26227 (2.275)	0.0261	157
PR2	0.14863 (25.934)	0.00049 (0.0832)	-0.0058	0.14726 (45.631)	0.02234 (0.589)	-0.0038	174
MB1	0.16565 (19.669)	-0.01138 (-1.368)	0.0029	0.16140 (34.965)	-0.07955 (-1.604)	0.0052	300
R83*	0.05284 (3.095)	0.10705 (6.185)	0.1764	0.10392 (11.069)	0.63961 (5.914)	0.1633	175
R84	0.13414 (11.654)	0.00979 (0.801)	-0.0041	0.14291 (23.504)	0.00492 (0.0638)	-0.0114	89
R85*	0.08266 (2.928)	0.10854 (3.739)	0.1623	0.12668 (8.187)	0.75812 (4.059)	0.1877	68
MR2	0.13912 (7.469)	0.01966 (1.057)	0.0004	0.15065 (14.847)	0.09055 (0.801)	-0.0012	296
R12*	0.21305 (8.820)	-0.06600 (-2.603)	0.0410	0.18859 (13.689)	-0.47931 (-2.811)	0.0486	136
MB3	0.10631 (12.116)	0.03158 (3.550)	0.0672	0.11773 (25.113)	0.23052 (4.309)	0.0984	162
R86*	0.11235 (7.706)	0.04738 (3.122)	0.0481	0.14201 (17.213)	0.19264 (1.931)	0.0155	174
R13	0.14649 (19.085)	0.00002 (0.0027)	-0.0053	0.15368 (36.566)	-0.08418 (-1.767)	0.0112	189
R87	0.12735 (18.129)	0.01551 (2.139)	0.0174	0.13422 (33.629)	0.09882 (2.069)	0.0160	203
B14	0.11260 (10.223)	0.03984 (3.577)	0.0336	0.14065 (22.415)	0.12845 (1.804)	0.0066	340
B15	-	-	-	-	-	-	-
R88	0.13027 (8.039)	0.01220 (0.748)	-0.0031	0.13788 (15.571)	0.05116 (0.513)	-0.0052	144
MB4*	0.11973 (5.049)	0.04776 (2.042)	0.0225	0.15441 (12.347)	0.15070 (1.101)	0.0015	139
IA1*	0.14713 (11.549)	-0.00856 (-0.673)	-0.0014	0.14528 (2.654)	-0.07557 (-0.977)	-0.0001	402

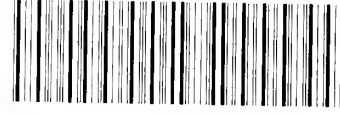
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